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1954

BALL *Mum* GUIDE
AND CARNATION

Geo. J. Ball
INC.

WEST CHICAGO, ILLINOIS

For MUMS that PAY- - - *Plan!*

Show us a grower who makes money with his Mums, and nine times out of ten, he **plans ahead**. His crop is set up in writing months before the cuttings are planted.

His planning is based on careful thought as to what will sell—and when. It covers in detail what is to go in each bench, all dates—plant, pinch, shade (if any), etc.

Our 1954 **Guide** is specially organized to make such planning easy for you, whether you are a retail grower, planning one bench of November pomps, or a year 'round man figuring in acres of glass. The dope you need is in these pages.

And—might we add—if you're interested in a more comprehensive off-season type program, and you're pressed for time to do the job yourself, call on our Mum Planning Service—details on page 16.

Yours for Mums that pay!



George K. (left), Bob, Vic, and Carl Ball. The handsome white Mum—old favorite, Indianapolis White.

George K. Ball

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INSTRUCTIONS FOR ORDERING

The minimum total order that can be accepted is 500 cuttings.

Fifty of each variety is the minimum that can be supplied. More than 50 of a variety must be in multiples of 50.

Orders must be marked with a definite delivery date, such as May 10th, June 1st, etc. Orders marked "Early Delivery," "Deliver when ready," "Spring Delivery," are too indefinite.

In writing your order, please use special order blanks enclosed with this catalog.

SUBSTITUTIONS

We will substitute varieties as good or better for any items not listed in this catalog unless order is marked **No Substitutions**.

SHIPPING INFORMATION

Special shipping instructions and address if different from your regular mail address should be shown on your order.

All cuttings are shipped Railway Express, Air Freight or Air Express, collect. If you have any preference, designate on your order; otherwise our shippers will use their best judgment. Cuttings are in perfect condition when they are accepted by the transportation company. Therefore, if there is any damage enroute from being broken, heated or frozen, **CALL YOUR EXPRESS or AIR FREIGHT AGENT** to inspect the shipment upon arrival, marking on express receipt or bill of lading the condition of the package and amount of damage, etc. **YOU MUST FILE CLAIMS**, as our responsibility ceases when the carrier accepts shipment. We cannot be responsible for the safe arrival of your cuttings.

LIMITATION OF WARRANTY

Geo. J. Ball, Inc., warrants to the extent of the purchase price that seeds, plants, or bulbs sold are as described on the container within recognized tolerances. Seller gives no other or further warranty, express or implied.

**IMPORTANT: ABSOLUTELY NO CHANGES ON YOUR ORDER CAN BE ACCEPTED
WITHIN 30 DAYS OF DELIVERY DATE.**



A typical modern Mum crop. The 90 days scheduled from planting to flowering for this shaded September crop developed just enough height to insure adequate stem—no extra to be wasted. Plants not pinched. Variety in foreground: White Shasta.

Modern Mum Growing

Vic Ball

#1. HAVE A PLAN

The starting point of any mum program is this: What do you want to flower, and when? With this decided (in writing), it becomes a question of selecting varieties, proper dates to plant, etc. Here's where you will find this information in your 1954 **Ball Mum Guide**:

a. For normal season crops

Variety recommendations: our "best" list for each color of mums and poms for each month. Pages 11 and 12.

Schedules: flowering dates, pinch dates for all varieties are given in our regular list beginning on page 52. Planting dates are figured back from pinch date—see page 2.

b. For "off-season" crops

Varieties, schedules, temperatures, etc., all details in year 'round tables, page 17.

c. For pot mums

Both variety and schedule recommendations begin on page 37.

We highly recommend that you have a complete plan in writing covering all the above points. Make

it well in advance. If you have a grower, be sure he has a copy. Better yet, tack it on the end of the bench.

You and your men will enjoy working from a written plan.

And you'll do a better job, too!

#2. SOIL MAINTENANCE

Any reasonably good soil will grow Mums. It's the care you take of it that counts. Once a year, just prior to benching of Mum cuttings, we do this:

a. Humus

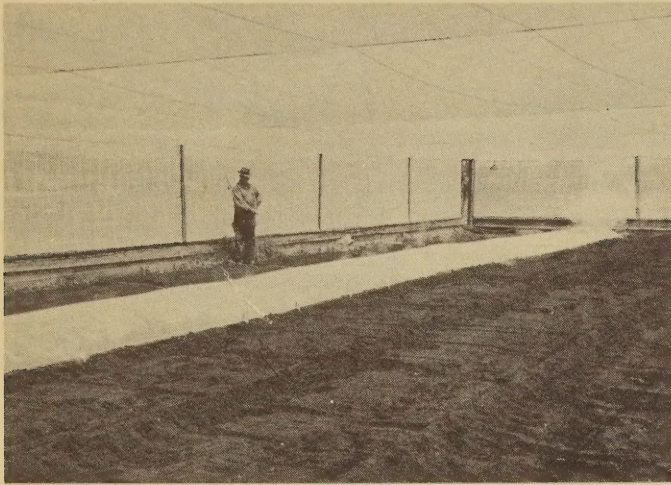
Add about 1½-2 inches of either peat or manure or possibly a combination. This takes about 2 to 3 wheelbarrows per 100 sq. ft. of bench. This humus keeps soil loose, open, helps retain moisture and nutrients. It makes 'em **grow!**

b. Phosphate

Add 3 lbs. of 20% super-phosphate per 100 sq. ft.

c. Rototill

The "knife" type cutter does not pulverize the soil so badly. Example—Milwaukee Model B-16.



Steaming cloth house soil. By means of a quickly moved covering arrangement, one man can steam our 12,000 sq. ft. cloth house in three days—using an oil fired (automatic) boiler. It eliminated weeds, verticillium, wilts, etc. very effectively, and was well worth the cost in our experience. For full details, see **GROWER TALKS**, September 1953, page 3.

d. Steam

180° for 30 minutes. **Grower Talks**, August and September '53, give details. If you don't have steam, how about the new Steam-Flo portable steam generator—under \$600. Capacity of 300 sq. ft. in 2-3 hours. Write Rough Brothers, 4227 Spring Grove Ave., Cincinnati 23, Ohio.

Chemicals? O.K. for insect and weed control, but considered second to steam in controlling soil diseases.

If chemicals are used: **Chloropicrin** (tear gas) does the most effective job of killing disease organisms. However, plants are very sensitive to it—must not be used in a house where plants are growing. Also, takes some days for all gas to escape from soil. Not as dangerous to growers account strong odor. Trade name: **Larvacide**.

Methyl Bromide: less effective in killing disease organisms, but far less prone to injure plants. Clear Methyl Bromide can be used in a house with other plants with normal precautions. MB is more dangerous to growers since it has no strong characteristic odor. MC2 is MB with a small % of Chloropicrin as a warning agent—but also enough to injure plants.

e. If nitrates and potash are very low or blank add 1½ lbs. of 10-8-6 (Vigoro) or its equivalent per 100 sq. ft. Cuttings will definitely take off better and quicker with nitrate and potash testing medium.

f. If soluble salts test high

Or if nitrate or potash tests are very high, soil must be thoroughly leached before planting. We don't find it necessary to test each bench before planting. Experience will soon tell you what to expect in your own soils. Excesses of nutrients and of total salts are often associated with a hard tight soil—lack of humus.

#3. PLANTING—WHEN AND HOW

Point #1. **Good cuttings.** Even with the best of preparation, a poor cutting will never make a good plant. A good cutting should be husky yet soft (succulent) 4-6 inches long, well rooted (roots 1-1½ inches long)—and clean!

Point #2. **When to plant.** For normal season crops, bench cuttings 3 to 4 weeks prior to catalog pinch date. That's about July 4 for Thanksgiving Mums. Cuttings planted earlier will produce poor sprays, be too tall. Planting later will give good sprays, but short stems.

Point #3. **Bench cuttings directly.** Gives better growth, saves a lot of work. There's no trick to it if these steps are followed **religiously**.

a. Nutrient Levels,

(especially nitrate and potash), must be low to medium. Too high burns roots; too low starves plants. Avoid excess of total soluble salts, too. Solu-bridge tests check this.

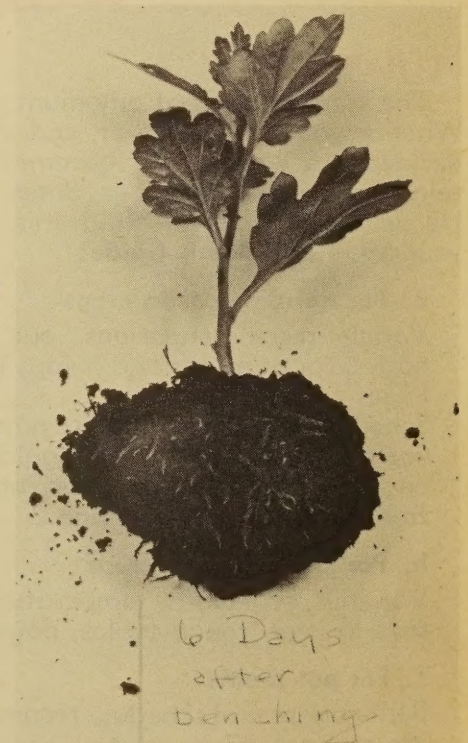
b. Add plenty of Humus.

Add ¼ by volume yearly—peat or manure, or a combination.

c. Steam soil the day before you bench.

Fork soil with a potato hook if it's a bit warm. We hold off steaming till cuttings actually arrive. Some growers wait a week or two between steaming and planting. Often they add Gypsum 5 lbs. per 100 ft. and leach heavily. Both from our own experience, and that of many modern growers, we believe that if soil has ample humus

If the rules of direct benching are followed closely, roots like these should be typical within 7 to 10 days after planting of cuttings. This cutting was direct benched the day after soil was steamed.



6 Days
after
benching

and moderate nutrient and salt levels, cuttings will take off quicker if planted the day after steaming.
Try it!

d. Never plant cuttings in bone-dry soil.

e. Plant shallow.

How can we emphasize this enough? A cutting with roots set 2-3 inches below soil surface will take twice as long to get going. Try it both ways to convince yourself.
Set cuttings so that roots are just barely buried. Firming soil with a roller before planting helps keep the men from burying cuttings.

f. "Mist"

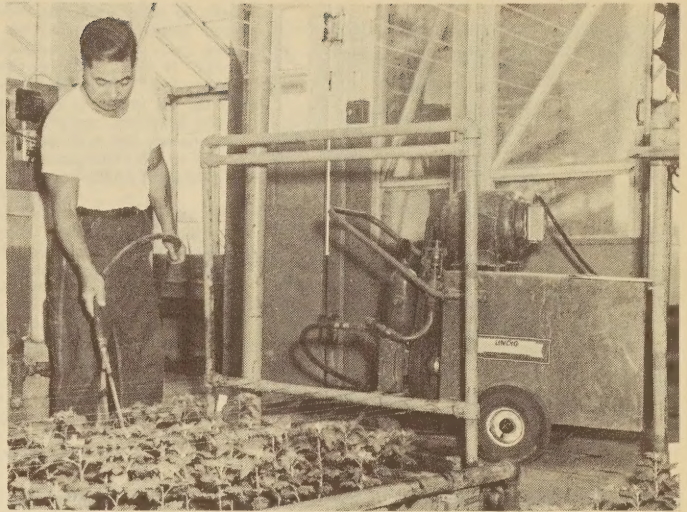
... new cuttings 3-4 times daily—till established—especially in hot weather. Cuttings kept misted constantly after direct planting will never stop growing. Come as near this as you can with frequent spraying.

g. Cold Storage.

If cuttings have been stored at a low temperature, be sure to warm them up gradually—at least 12 hours at 50-60° before planting in a hot greenhouse.

h. Exposure.

Exposure of cutting roots to hot sun for even a few seconds kills them. It's a temptation to lay them out on the bench as you plant.



A quite practical method of applying liquid fertilizers—especially for the smaller grower. The fertilizer solution is mixed in the regular insecticide sprayer tank, spraying nozzle is removed from the boom, and you're all ready to go! A 500 sq. ft. bench can be covered in 10-15 minutes. Details page 4. In the photo: Frank Watanabe. For other ways of doing this job, turn the page.

POINT #4. SPACING—

TOO CLOSE MAKES CULLS.

For normal season Poms where a uniform quality spray is desired, space 6 x 7, prune to 2 stems per plant, 3 on outside rows. This will give very few culls and you'll be averaging 6 stems per 9-10 ounce bunch.

Some growers space 7 x 8 or 8 x 8 inches, prune all plants to 3 stems. This gives more culls, less uniform cut, and more stems per foot.

Standards: the trend seems to be away from a 6 or 7 inch Mum. They bring little more than good, clean 4 to 5 inch blooms. We are spacing our pinched standards 7 x 8, 3 stems per plant.

Off season spacing—see page 15.

#5. FEEDING AND WATERING—

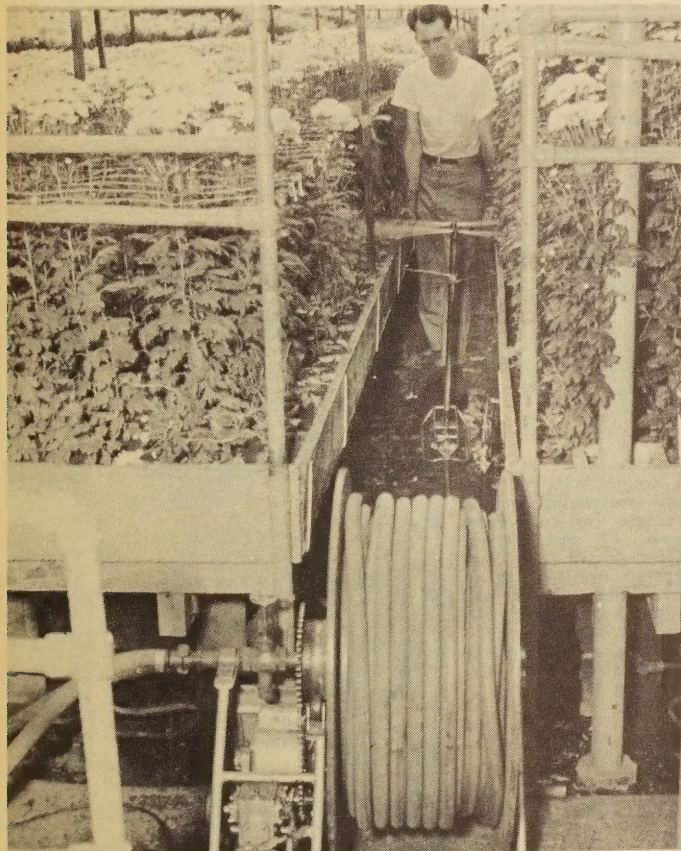
SO IMPORTANT!

Most mum crops (our own included), could generally make more growth, production, and quality if they were fed and watered more regularly. Yet there are cases of injury due to excesses—mainly in feeding.

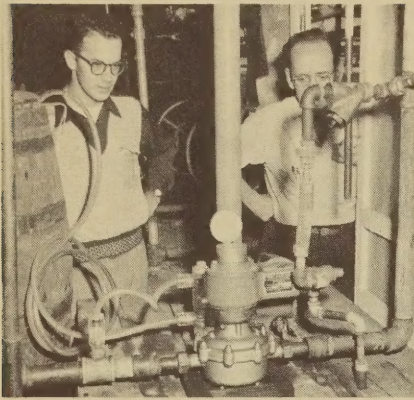
Let's talk about the excesses first. Injury from overfeeding usually results from either

- heavy fertilizer applications on a tight soil—not enough humus—poorly drained, or
- heavy shots of feed to plants before they are in active growth, or
- feeding too big an application at once. A bench of mums that are standing still, hardened, or yellowed because of tight, poorly drained soil certainly can't be improved by a very heavy fertilizer application.

The next question, how to set up a feeding program that will be adequate, yet not excessive. Here's how we go about it.



Are you using automatic watering? There are several quite practical systems available, any of which stand to save you many hours of precious time. The Hoseboy pictured here has done the job very nicely on our Mums—and incidentally, is feeding as well as watering in this photo. Details page 4.



Left, a new unit for injecting liquid fertilizers into your regular greenhouse watering lines. We've had only two months' experience with it as we go to press. It does look encouraging, especially for medium and larger sized places. It practically eliminates all labor in feeding (you feed as you water); gives uniform, accurate distribution, too. It's not inexpensive, but will pay off, in our opinion, on ranges of 50 to 100 thousand sq. ft. or more. More details in GROWER TALKS soon. In the photo: Jack McCluskie and Vic Ball.

Still another method of handling the liquid fertilizer problem—the Delta Dispenser, right—as seen at Columbia Gardens, Cedarburg, Wisc. Fred Plaggeman, proprietor, in the photo. Fred reports the unit, tho not perfect, generally is satisfactory. He handles most of the feeding of his Mums and Carnations with it—thru surface type nozzles. Fred says, "Be sure to mix the fertilizer first (in the washtub), then put it in the sphere—to keep solid particles out." If she plugs, you have to remove all those dozens of bolts on the sphere to clean it! It is fully automatic, tho, and Fred likes it. Fred (and Irene!) are doing a particularly nice job on continuous Mum flowering for the Milwaukee market.



a. Before benching cuttings, if nitrate and potash are in the zero to low levels, we add around 2 lbs. of 10-8-6 (Vigoro) per 100 ft., applied dry, worked into soil. It's easy and cheap to apply dry before planting.

b. As 4-6 inches of new growth has been made, we start regular applications of liquid fertilizer, mainly nitrate and potash. Amount and frequency depend on needs of plants, etc. Heavy growth setting buds in warm, bright weather needs a lot. Smaller plants in dark, cold weather want much less. Raised benches of loose soil with ample humus need much more feeding than ground beds of heavier soil.

c. A Program

What would be considered a fairly heavy liquid feeding program, and how can it be applied? We apply it with our regular 20-gallon insecticide sprayer. First a stock solution is made up of 50 lbs. 25-0-25 (Kapco) in 25 gallons of water. Stir till it dissolves. 1 quart of this stock solution is poured into the 20-gallon sprayer tank. Tank is then filled with water. Remove insecticide nozzle, set pressure to maintain 80 lbs. The 20 gallons will feed 200 square feet in about 5 minutes.

An application of this kind is made every week or two on Mums in active, heavy growth, on raised benches well drained. Ground beds in midwinter need something less than this.

d. Other ways to apply it?

Many growers use the Delta dispenser, others construct cement tanks and pump nutrient solutions directly to the bench. The Smith Fertil-ade pump is quite satisfactory. Fertilizer can be applied dry, but it's certainly more work. Somehow we do get better growth response from liquid feeding.

We are currently experimenting with a pump that will inject liquid stock solutions into greenhouse water lines at about 1 gallon per 250 gallons of water. Applied through the Hoseboye, it means fully automatic watering **and** feeding. Promising! Watch **Grower Talks** for details.

e. Phosphate feeding

The one shot a year (3 lbs of 20% super phosphate per 100 sq. ft. before steaming) is enough. It is so slowly available that, in this case, one heavy application yearly does the trick.

f. How soil tests can help.

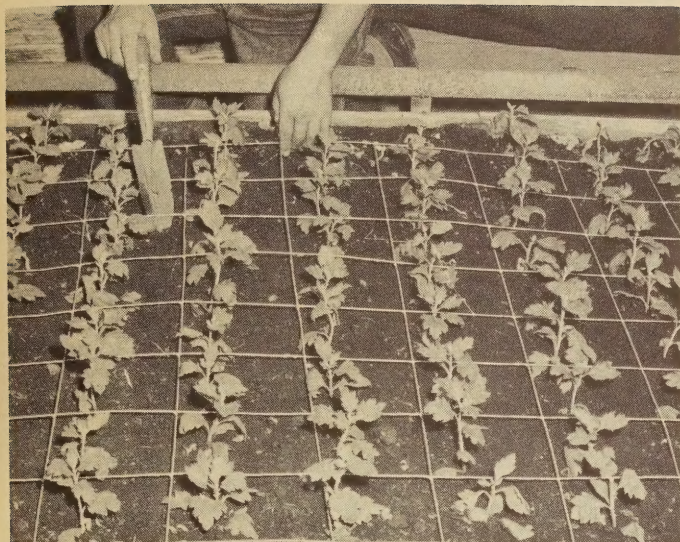
After a little experience, you can set up a feeding program that will supply just about the amounts needed. However, as a check or monitor on your judgment, we recommend some regular soil testing schedule. Once a month, or even less often, will give you an idea as to how you are doing.

Here are the levels in parts per million Spurway that we shoot for:

	Good Growing Range	Stop Feeding At
Nitrates	20-40 ppm	over 60 ppm
Phosphorus	3-5 ppm	over 20 ppm
Potash	20-40 ppm	over 40 ppm
Calcium	150-250 ppm	over 250 ppm
pH	6.4-7.0 ppm	



A single layer of wire and cross string such as we use for supporting most of our Mums. After growth gets well started, we like to go thru once a week and raise the supports. It can be done quickly—by simply untying the binder twine, and raising the 1 x 1.



Wire mesh supports. If mesh is of correct size, it can be unrolled onto bench and used for a planting marker—as it was here. Then, as cuttings start pulling up, the single layer of mesh is gradually raised—kept about 6 inches below the plant tops all the way along. This mesh is in quite general use for Mum supporting in some sections of the country, not at all in others. Why?

g. pH control

If pH is too low (acid soil) add 2 to 3 lbs. Calcium Hydroxide (hydrated lime) per 100 sq. ft. If pH is too high, add 2-3 lbs. of Aluminum Sulfate per 100 sq. ft.

#6. PINCHING—AND TIME PINCHING

Time pinching simply means pinching plants on the pinch date given in this catalog. See variety lists. To have normal (fall) Mums ready to pinch on the catalog pinch date, plant cuttings 3 weeks prior to that date—plus or minus a week. Then pinch on the date given in this guide.

Pinching on the correct date generally assures Poms with good, open spray formation. Standards pinched on the correct date will not usually throw crown buds—thus eliminating dog-leg necks.

Single stem: ordinarily produce good spray formation if cuttings are planted on the catalog pinch dates. Interrupted shading has been done experimentally, but our experience has been rather indefinite so far.

Softly, please!

You'd be surprised how much better results you'll get by just pinching out the top 1/4-1/2 inch. Pinching down hard means that new shoots must come from old, hard wood.

#7. SUPPORTING—THE LAZY WAY

One layer of wire-cross strings will support any ordinary bench of poms or standards. The one layer must be moved up every week or two, but if properly set up it takes only minutes. The photo on page 4 shows how we do it.

Better than this, though, is the use of wire mesh. Already in general use among western mum growers, it seems to be quite practical. We supported one bench this way on our own range this past spring. Between crops it is raised overhead out of the way for plowing, etc.

Wire mesh eliminates

- Unrolling and stretching individual lengths of wire;
- Winding them up after the crop;
- Stringing, too!

#8. INSECTS—PREVENTION VS CURE?

We vote for the prevention approach!

Once an infestation has built up, much damage is already done. Furthermore, it takes more effort to put down a serious build-up than it does to prevent its ever happening. Then too, the fellow who waits for trouble to appear must spend a lot of time just looking for it.

Here is the program we are now using—based on previous experience—and on the excellent dope on the subject from the state schools.

Basic spray

Starting 10-12 days after planting cuttings, we spray weekly in summer (less in winter) with the following solution, discontinuing spray when color shows.

Per 10 gallons water	Controls
2 1/2 oz. Parathion 15% wettable powder	red spider, foliar nematode, aphids, midge, thrip, various leaf chewers, mite.
1 1/2 oz. DDT, 50% wettable powder	thrip, midge, sow bugs, leaf rollers, pill bugs, leaf hoppers, white fly, tarnish plant bugs.
1 1/2 oz. Wettable sulphur (powder)	powdery mildew (may be omitted where mildew is not present)
2 1/2 oz. Fermate	septoria leaf spot, rust, (general fungicide)
Dreft (or other spreader)	spreader

Notes:

1. Some growers substitute a 1/2-strength Dithion aerosol bombing (G-57) for the above spray every third week, especially under glass.

2. Sources for the above materials: your local supply firm or Schramm Greenhouse Supply Co., Lee & Oakton Sts., Des Plaines, Ill.

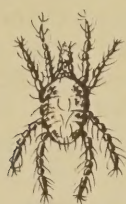
3. **Mixing procedure:** here's how we do it:

- Put all dry ingredients in a cut flower can.
- Add small amount of water, stir to make a thin paste. If water is poured in too fast, a cloud of dust from the dry ingredients will rise—obviously dangerous!
- Fill spray tank 1/4 full. Add above slurry gradually with stirring (run agitator in tank).
- Fill tank.

4. If aphids are especially troublesome, add 1 1/2 oz. of Lindane, 25%, per 10 gallons.

(Continued on page 7)

COMMON OFFENDERS



RED SPIDER

Actual size: $\frac{1}{84}$ inch
Not usually red—more often are yellowish or orange. Very small. Usually found on under surface of leaf. First sign of injury is pale green mottling of upper leaf surface. Will eventually cover lower surface with fine spider webs—later will spin webs over stems, buds, even support stakes. Build-up very rapidly in hot, dry summer greenhouse.

How to Identify

Control

Preventive program, page 5. Parathion very effective. Outdoor growers report good control with Systox, 1 liquid oz. per 100 sq. ft. of area.



MIDGE

Actual size of gall: $\frac{1}{8}$ inch; adult fly, $1/14$ inch.
What you usually see are the peculiar small ($\frac{1}{8}$ inch) light colored humps or warts—usually on the new, tender leaves. Inside may be found the tiny egg or larvae pictured above—or he may be gone! Eventually cause gnarling and deforming of entire growth tip.

Preventive program, page 5. DDT dust **kept** on all foliage is very effective.



SYMPHILIDS

Actual size: $\frac{1}{3}$ inch
Found in soil, usually around roots. If Mums seem checked, growing slowly, yellow leaf edges; dig a few of the poorer plants. If you see these little white fellows running for cover, you've got symphylids! They chew at root tips.

On raised benches: steam. On the ground, drench soil with Lindane. Use 12 ounces of 25% wettable powder dissolved in 200 gallons of water per 1000 sq. ft.



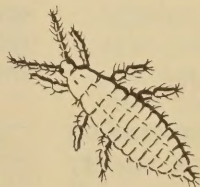
APHIS

Actual size: $\frac{1}{8}$ inch
Soft bellied lice. Pale green to dark brown, or nearly black. They usually infest new growth tips, leave molted skins, cause tips to be deformed. Also will infest open flowers.

How to Identify

Control

Preventive program, page 5. Lindanes especially effective.



THRIP

Actual size: $\frac{1}{32}$ inch
Usually pale green, sometimes darker brown. Infest foliage and open flowers; cause general browning of blooms, especially in warm weather. Flowers must be picked apart and examined carefully with hand lens to find them.

Preventive program, page 5. DDT especially effective.



MEALY BUGS

Actual size: $\frac{3}{8}$ inch
They're pure white, have a sort of waxy coating over them, usually are found in clusters. Often they hide themselves under leaves, etc. They are soft-bodied.

Preventive program, page 5.



LEAF TIER

Actual size: $\frac{1}{2}$ inch
This is the fellow that ties a Mum leaf about himself with a fine web—ruins foliage effect.

How to Identify

Control

Preventive program, page 5. DDT is very effective.



LEAF MINER

Actual size: $3/16$ - $1/4$ inch
You first know about leaf miners by the unusual appearing "tunnels" they dig across leaves—leaving both upper and lower leaf surfaces intact.

Preventive program, page 5. Hand picking helps, but is slow work.



TARNISHED PLANT BUG

Actual size: $\frac{1}{4}$ inch
An easy-to-identify beetle. Their sting harms tissue of plant, often causes deforming of growth, bending of tip.

Preventive program, page 5. Parathion is effective.



Common Mum diseases: left to right, normal leaf, septoria leaf spot, foliar nematode, puccinia (rust), botrytis (petal rot), and ascochyta (petal blight).

5. Petal rot (ray blight or botrytis): a serious problem especially on standards flowered under hot or humid conditions. A very effective preventive spray: per 10 gallons of water, 1½ oz. Parzate, and spreader. Apply every 4 to 7 days as needed, starting as color shows.

Use maximum pressure (200 lbs. or more) just hit flower buds and blooms. Takes only 4-5 minutes per 150 ft. bed.

6. Over a period of years, we find that insects (aphis especially) tend to become resistant to any one insecticide. Therefore, we change occasionally—using such materials as Lindane, nicofume pressure fumigators (under sateen), Aramite spray, Vaportone.

#9. MUM DISEASES

For simplicity, the preventive sprays for control of septoria leaf spot, mildew, petal rots, etc. were included under the insect section (page 5).

Here's a brief run-over on mum diseases:

Petal Rot (see photo)

These rots can ruin an otherwise fine crop—and in a hurry, too! Suggestions:

a. Under glass: fairly heavy shade, especially on standards flowered in midsummer, will prevent sunburn injury. Ample ventilation, even a little heat on during summer evenings helps prevent botrytis—keeps petals dry. Also, of course, Parzate spray on flowers from the time they show color. (Note 5, above.)

b. Outdoors: spray programs (page 6) are very effective. Parzate as a dust kept on opening flowers has given even better control for growers on the Gulf coast.

Septoria leaf spot (see photo)

Worse on outdoor crops. Clean cuttings plus the preventive spray program on page 6 will give good control.

Verticillium

Clean (cultured) cuttings planted to sterilized soil will eliminate it. Our cuttings **are** cultured!

Stunt

A virus that will stunt occasional plants to ½ or ⅔ normal height—and bleach flowers of red and bronze varieties. Again, clean cuttings on sterilized soil ordinarily eliminates this problem.

Foliar Nematode

Tiny worms feeding within the leaf tissues cause this condition. Especially under outdoor—or any warm, wet conditions, it can spread very rapidly.

Control: preventive spray program, page 6. The Parathion does it.

Dodder

Pale, yellowish to orange threads (vines) growing very rapidly over stems, leaves and flowers—that's Dodder. It has no leaves—being a parasite. It can ruin a bed of mums in 2 weeks. Usually it comes in with peats, soils, or manures from outdoors. Steam kills it.

Once a bench is affected, it is far cheaper to remove and burn all affected plants.

#10. CLOTH HOUSE ANGLES

Top quality pomps are flowered under cloth from August 1 into October—if frost protection is available. Pointers.

a. Schedules—the regular tables apply.

b. Diseases are something more of a problem than under glass. The preventive sprays outlined on page 5 will keep them clean ordinarily, though.



September Standards grown under plastic protection. At least in our section, it is necessary to protect outdoor grown Standards from rain or they will rot ruinously. These glass substitute roof sash, if properly installed, will do a fair job. But they are not as tight as glass, are subject to storm and wind damage—and if considered over a period of years are not really cheap. Perhaps as we gain more experience with these plastics, and as the materials themselves improve (they are!), they may come into more general use—especially in the near South where winters are mild.

c. Cloth. Cotton or aster cloth is more effective in keeping leaf hoppers and small insects out than plastic (Saran). The Saran is more expensive but will last many seasons.

If Saran is used, specify amber—**not** the green. The green makes too much shade—reduces production.

d. Cloth house construction—for full details see our **Ball Red Book**, page 58.

e. Varieties. The following are recommended for August-September flowering.

White: Shasta	Yellow: Mary L. Hall
Whitetop	Aztec
Belray	Starlight
White Popcorn	Orange Beauregard
Keepsake	Yellow Shasta
Pinocchio	Gold Coast
Snowdrift	Golden Herald
	Sunup
Bronze: Beauregard	Pink: Reward
Palette	Blue Chip
Mrs. Dewey	Tempo
Chevron	Pinkette
Paragon	Mayfair
Buckskin	Pink Dot
Thelma	Pandora
	Linda Lou

The above varieties, plus the following may be used after October 1.

White: Crystal Beauty	Yellow: Golden Chord
Sculpture	Lollipop
	Klondike
Bronze: Thelma	Pink: Minuet
Rusticon	
Bronze Minuet	

#11. SHADE ON THE GLASS?

Opinions among growers do vary plenty here! Our own experience has led us to these conclusions.

a. The less shade, the better as far as growth, production, quality of Mums (or Snaps, or Carnations) are concerned.

b. Standards flowered during the hot summer months will usually show petal rot or burn unless shaded fairly heavily (during flowering only)—and given regular Parzate spray. Somehow, muslin or aster cloth stretched above beds in flower doesn't do as much good as actual shade on the glass.

c. We have **not** been shading newly planted cuttings the past two summers. It seems unnecessary if they are sprayed overhead lightly several times daily till established.

d. There are times when it just gets so hot under glass that if you expect people to stay in there and work, you have to put a light shade on. It does help cut down watering. And it reduces temperature under the sateen covers in late afternoon.

e. Pot Mum specialists who flower through the summer months generally carry a light shade.

f. Tests at Michigan State College showed that ordinary Aster cloth (46% light reduction) cut production very substantially on greenhouse Poms. Different varieties produced from 10% to 55% less bunches per foot under the cloth compared to full sun (in the greenhouse).

Makes you want to **not** shade!

#12. "TAKING" THE BUD.

Which bud to let flower on big Mums?

Now that we grow Mums on definite schedules, this too can be reduced to simple rules.

The rule: if the crop was planted and pinched on or near the recommended dates flower the first bud that appears. In other words, as soon as a bud of any kind appears, remove all side shoots and let the center bud flower.

Crowns and terminals.

Under long summer days (14 hours) a Mum will remain "vegetative"—will produce "blind" growth tips free of buds. As the days gradually shorten towards fall, the Mum becomes "reproductive"—and produces a cluster of flowering buds at the growth tip.

When a plant is physiologically midway between vegetative and reproductive growth, it may produce a so-called **crown bud**—a single flowering bud surrounded by blind or vegetative shoots. It might be called a half hearted flowering bud—produced by a plant not yet fully reproductive.

As days shorten still further, the same plant will become fully reproductive and produce a **terminal bud**—a cluster of flowering buds.

Some of these half way vegetative crown buds can be left on and will make good flowers, some can't. You can't tell by looking at them. The point is that if the crop is planted, pinched, and grown according to recommendations, even though a crown might appear, it will almost always be a "good" one. Hence our recommendations to flower the first bud that appears—crown or terminal.

The rule applies to both normal and off-season crops.

A possible exception.

Under certain conditions of day length, temperature, etc., some varieties of Mums (or Pompons) can produce a crown bud 3-4 weeks or less after planting. Such crowns produced while the plant is less than 18-20 inches tall, we remove and allow one vegetative side shoot to grow on.

On normal season standards, a crown that appears earlier than these dates, is best removed:

Varieties that flower	Remove crowns that appear before
Oct. 15-Nov. 5	Sept. 5
Nov. 5-30	Sept. 25
Dec. 1-15	Oct. 5

TROUBLES

We all have them! Here are the six that reach us most often.

Is **your** problem among them?

1. Cuttings rot off shortly after or within a month of planting.

Usually a hot weather problem. Several rots can cause this. Most common is *Rhizoctonia*.

Very little of this loss is experienced where clean cuttings are planted to soil that has just been thoroughly steamed. It is to prevent this type of loss that we make it a point to steam all our 3-crops-a-year mum beds just prior to the summer planting.

Too deep planting can aggravate this problem.

Check over the rules for direct benching, page 2.

2. Blindness, uneven bud set on winter or early spring mums. Not abnormally tall.

Nearly always the result of too low temperatures.

On late December normal season pomps (Garza and Snow) or on mums, this can usually be remedied by holding 55° minimum night temperature till buds are well developed. After color shows many varieties can be dropped to 45° or even less.

Lighted Mums flowered from January thru June need even higher temperatures to insure bud set:

63° from planting till color shows

52-55° or less after color shows

Be sure that the temperature down among the plants is the same as at your thermometers. And watch cold ends! Have you checked your thermometers?

3. On summer crops, buds form O.K. but are very slow developing—flower 4-5 weeks later, unusually tall.

Excessively high summer temperatures under the sateen will delay development of buds as much as 5-6 weeks. Even then, sprays will be uneven.

Work at our state schools shows that if tempera-



19 inches high 30 days after benching of cutting. Allowing for height of cutting, this means about 1/2 inch a day. Mums that fall much short of this 1/2 inch a day rule of thumb are being shorted somewhere—either in quality of the original cutting, or in watering, feeding, etc. Exception: during dark winter weather they do grow slower. Frank Watanabe with the trowel.

ture under the sateen is 95° for 3 hours nightly, bud development will be seriously delayed.

Here are the practical steps that can be taken.

a. During June-July-Aug. apply sateen 6 p.m. to 7 a.m. standard time to avoid the late afternoon heat.

b. Keep some shade on the glass to cool the houses.

c. Use early varieties (8 to 9 week response group) since they are much less affected by high temperatures. Varieties with a normal blooming date later than October 25 are shaky.

d. Exhaust fans—expensive, but have helped some growers.

Outdoor shaded Pomps under plastic mesh. Note the "Igloo" type roof support—and the sateen out on top of the Saran. If given adequate feed and water, Pomps of as good or better than greenhouse quality can be grown in this type of structure—for August-October flowering. Photo at Yoder Bros., Jake Miller and Geo. K. Ball in the photo.



4. Especially on spring crops, plants just seem to go wild—tall, rank growth, few or no buds, grow 6 ft. tall.

If a Mum plant is allowed to grow much beyond 18 to 24 inches tall before short days are started (start shade or lights off date), it seems to go wild. It goes into a rank sort of vegetative growth. The taller it gets without setting buds, the more impossible it is to make them set.

If such a bed reaches 36 inches without bud set, better discard the plants.

What can be done to prevent it?

a. As a general rule, short days should be started on any mum crop when it reaches 18 to 24 inches—regardless of desired flowering date. The shorter the plant when short days start, the more prompt and even the bud set. Too few long days, though, mean too short stems.

b. If plants are over 20-22 inches tall before shade (or lights off) date, maintain a **generous** 63°, better 65-67° till buds are well formed. Also, be sure saeten used (if crop is shaded) is tight and of good quality.

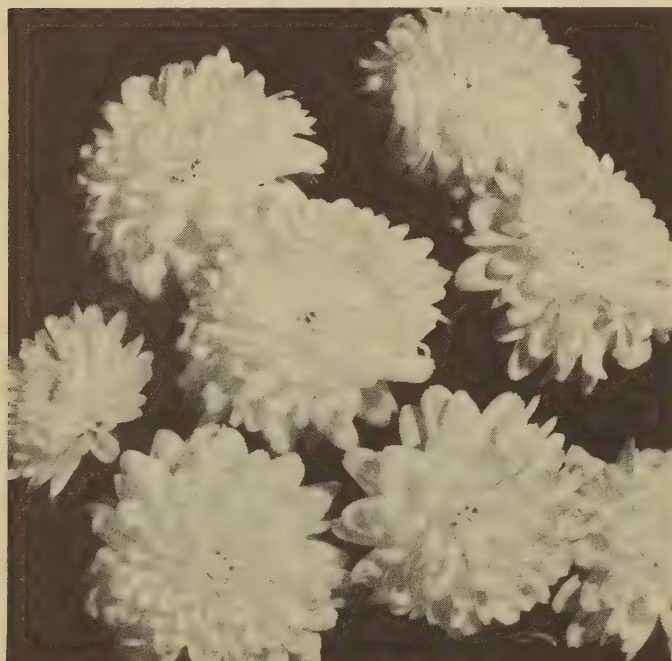
c. Maintain 63° from planting till short days start. Cooler temperatures here can aggravate the problem.

d. Be mindful that certain varieties are prone to go on a vegetative spree of this kind. Examples: Encore, Golden Chord, Moonglow, Majorette.

4. Growth is uneven, slow. "Why don't my mums grow like those in the catalog pictures?"

Suggestions:

a. Soil needs more humus—peat or manure. 1/4 by volume every year is standard among many good growers. Ever notice how often plants in a tight, heavy soil will mildew?



ENCORE



Spring Poms under lights—to delay bud formation until adequate stems develop. Where a substantial number of beds are being lighted, the "demand" charge can be reduced by lighting half the beds before midnight and half after.

b. Under-fed—soil tests will tell.

c. Under-watered—a good soaking every third day on raised benches in summer.

d. Cuttings planted too deep. (It will **surely** make a bed uneven!)

e. Symphilids—are you **sure** you don't have them? Dig a few plants.

f. Excess salts—try a Solu-bridge test. Your state school can do it.

5. Plants break slowly and sparsely after the pinch.

It's the same story with an azalea, carnation, or a mum. To get good breaks a plant must

a. have ample nitrogen, potash, etc.

b. have ample sunlight (crowding, excess shade on glass, and cloudy weather can interfere here).

c. have loose soil and ample watering.

6. Cuttings set buds two weeks after planting. What's wrong?

This one usually happens to the fellow who orders cuttings to arrive in March or April and isn't set up to light them.

The cure:

a. Mums that you want to keep vegetative must be lighted between July 15 and May 15. See page 14 for details.

b. It helps a lot to prevent this premature bud set if plants are kept in a cool house—50°.

c. Keep plants well watered and fed.

d. Remember that earlier flowering kinds bud easiest. Examples: Blazing Gold, Legal Tender, Masterpiece, Silver Sheen, Constellation, Seneca, and all hardy varieties.

Ball preferred varieties for

NORMAL SEASON BLOOM

(Based on our greenhouse tests)

	Sept. 15-30	Oct. 1-15	Oct. 15-30	Nov. 1-15	Nov. 15-30	Dec. 1-15	Dec. 15-30
WHITE SPRAY TYPES Formal Pompons	(Note 2)	Horizon Norona Classic	Pristine Pinocchio (button) Songster Keepsake	Encore Rev. Bush- nell Wh. Top	Priscilla Paramount Belray	Acclaim Snowcap Fortune	Snow
Decorative Pompons	(Note 2)	Silver- plate	—	Ill. Snow- drift	Highbrow Cordova	Monarch Cameo Silversmith Carrara	Revelation Ill. Snow- bound Heirloom
Single	(Note 2)	Calif. Wh. Daisy	Shooting Star	Pacesetter Wh. Mensa Sculpture	Wh. Valencia Eskimo	Yukon	—
Anemone	(Note 2)	—	—	Little America Shasta Wh. Norma	L. I. Beauty Wh. Lady	Wh. Supreme Garza	—
STANDARDS	(Note 2)	—	Silver Sheen Ambassador	Albatross Betsy Ross Ind. White Monument	Mefo Chattanooga Sterling Marketeer Goldenrod	Dec. Glory Smith's White	(Note 1)
YELLOW SPRAY TYPES Formal Pompons	(Note 2)	Br. Forecast Yel. Irene Sweepstake Treasure	Gold Coast Mary Hall	Crescendo Pixie (button) Golden Chord	Lollipop Klondike Pippin	Yel. Fortune Nosegay Corsair Sequin (button)	Golden Anniv. Yel. Snow
Decorative Pompons	(Note 2)	Lemonade Lee Powell	Golden Herald	Constella- tion Princeton	Goldsmith Yel. Cordova Yel. High- brow Highlander	Brandywine Yel. Riviera	Vibrant Revelry Siren Yuleflame
Single	(Note 2)	Polaris Goldrush	Aztec Creampuff Sch. Yel. Daisy Sauterne	Honeymoon Gold. Mensa Yel. Nagona Thorobred	Bojangles Champaign Yel. Valencia	Cinderella Challenge Yel. Galaxy	Goldseal Sunkist
Anemone	(Note 2)	—	—	Yel. Shasta Susanne Miller	Yel. L. I. Beauty (disbud)	Yel. Supreme Yel. Garza	—
STANDARDS	—	—	Blaz. Gold Yel. Am- bassador	Good News Ind. Yellow	Yel. Mefo Golden Pearson Harvester Dk. Yel. Chattanooga	Gold. Mrs. Ross Meteore	(Note 1)

Note 1 We strongly recommend using earlier varieties delayed by lighting for this period. Results are far superior to use of normal December varieties. Best ones to use: Indianapolis. No shading is needed.

Note 2 Superior quality in both Spray Types and Standards can be produced by black cloth shading later varieties to flower in this period. See year 'round tables.

Disbuds In general, any Spray Type classed in our list as "large" can be grown as a disbudded pompon. The later flowering varieties are better. Examples: The Doty's (white and yellow); the Valencias; Mason's Bronze, Red, Yellow; the Normas; Long Island Beauty; Espy varieties; The Titan.

Ball preferred varieties for

NORMAL SEASON BLOOM

(Based on our greenhouse tests)

	Sept. 15-30	Oct. 1-15	Oct. 15-30	Nov. 1-15	Nov. 15-30	Dec. 1-15	Dec. 15-30
PINK SPRAY TYPES Formal Pompon	(Note 2)	Jewell Adagio	Enterprise Jessie Pk. Dot Pinkette	Thyra Master- piece	Minuet Almaga Ill. Formal	Minstrel Heritage Argyle	Medallion Rose Me- dallion
Decorative	(Note 2)	Betty Spellbound Allegro Lassie Brigadier	Carolyn Yosick	Pandora Taffeta Portrait Blue Chip	Pinky	Riviera	Defiance
Single	(Note 2)	Serenade Sweetheart	Mirth Reward Mayfair	Rainbow Nobility Soprano	Sal. Valencia Dk. Valencia Hasegawa Pink	Debutante	Rosalind Coronet
Anemone	(Note 2)	—	—	Linda Lou Memorial Dk. Norma	Dk. L. I. Beauty Orch. Beauty Beautiful Lady	Enchantress Dk. Pk. Supreme	—
STANDARDS	(Note 2)	Pink Chief	—	Ind. Pink Dk. Orchid Queen J. W. Prince	Helen Frick Ed. Seidewitz Thanks, Pink (reflex)	—	(Note 1)
BRONZE SPRAY TYPES Formal Pompons	(Note 2)	Moonmaid Carnival Carmine Queen Detroiter	Adelaide Bronze Dot Navajo J. Stewart	Orange Beauregard Beauregard Cassandra Paragon Magician	Ill. Warrior Rusticon Thelma Ill. Redwood	Br. Minstrel Debonair Pageantry Harlequin	—
Decorative Pompons	(Note 2)	Huntsman Firecracker Robinhue Red Velvet	Firebird	Red Seneca Rubicon Chevron	Legal Tender Br. Gold- smith Amberina	Christmas Greeting Bronze Riviera	—
Single	(Note 2)	Rajah	Buccaneer Buckskin Talisman Gaiety	Mrs. Dewey	Festival Apricot Valencia Indian Head	Galaxy Christ. Star Holiday	Merrymaker Poinsettia Sarong
Anemone	(Note 2)	—	—	The Titan Shalimar	Yolanda Red Rolinda	Dazzler Br. Supreme Br. Enchan- tress	—
STANDARDS	—	—	Hilda Bergen	Apricot Queen Detroit News Mrs. Roy Ind. Bronze	Gladys Pearson Oak Leaf	Muto's Crimson	(Note 1)
BEST SPIDER MUMS (all colors)	—	—	Kay Tashima Mary Garden Queen's Lace Yellow Lace	—	—	—	—

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Indianapolis Mums delayed by lights for Christmas bloom. We find them far superior to the varieties that are catalogued for normal flowering during this period. They are better colors, free of disease, and will flower when you want them! Geo. K. Ball in the photo.

Year 'Round Section

Why 'Round the Year Flowering?

New, continuous flowering mum programs are appearing constantly—and in all sections of the U. S. Reasons, as we see them:

1. Good returns—over \$3.00 per sq. ft. per year net after commission, for a conservative average.
2. Steady, low work load. You plant, prune, pick flowers **every** month.
3. Steady returns.
4. Continuous production is in tune with the steady demand of markets, or your store if you retail.
5. Mums will keep well, offer a wide variety of colors and forms.

Correct Temperatures—Be Generous!

Continuous flowering should not be attempted until the grower is equipped to hold a 62° minimum from planting till color starts to appear. Previous recommendations called for 60°, but several years experience have convinced us that less than 62° minimum will result in more or less blindness on cold ends of houses. Cooler air down near plants and varietal differences make this extra 2 degrees a must for dependable, even bud set.

Our temperatures for off-season:

Nights	Cloudy Day	Sunny Day	Period
62°	68°	75°	From planting cuttings till color shows.
53°	58°	67-70°	After color shows (reduce temperature gradually — never faster than 3° per week.)

We hold different temperatures in a given house (at night) by dropping sateen igloos (see page 14) over the beds that need the higher temperatures, turning heat into pipes under these beds.

On some ranges, layout of heating system, benches etc., makes it impossible to lower temperatures on individual beds during the flowering period. In such cases, if varieties are selected with this problem in mind, the crop can be grown at a straight 62° minimum through the winter. This does eliminate some desirable varieties (Silver-smith, for example) but many continuous flowering programs are operated this way—and produce excellent quality winter flowers.

50 Degree Winter Mums

Quite a few varieties actually will set bud and flower at regular 50° temperatures. However,

many (pumps, especially) suffer so badly in production and spray formation that it is not recommended at this time.

Indianapolis Mums seem to be one exception—they do well at 50° even in northern winters.

Lights—Why and How

Reason for lights: to delay bud formation on winter crops till stem elongates.

How to light: (with separate reflectors) :

	Watt	Spacing	Height above soil
One 4 ft. bed	60	Every 4 ft.	60 inches
Two 4 ft. beds One row of lights	100	Every 6 ft.	60 inches
Three 4 ft. beds One row of lights	150	Every 9 ft.	60 inches

Reflectors must be held up off the bulb. Built in reflector bulbs may be used. For a 20 ft. wide house, a single row of 300 watt reflector bulbs facing down at a 45° angle, spaced every 10 ft. will do it. Bulbs should be staggered on alternate sides of ventilators—not directly under account of rain damage to bulbs. Figure about 1½ watts per square foot of ground covered. Indoor type bulbs may be used if covered with metal protectors to keep water out. Use flood, not spot bulbs.

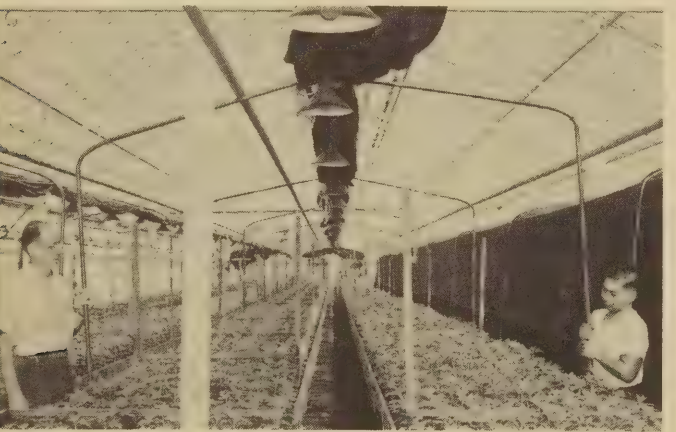
It takes 7 foot candles to prevent bud formation.

On large installations, half the beds may be lighted before midnight, half after. This halves the demand cost.

230 volt lines reduce main sizes greatly.

HOURS OF LIGHT PER NIGHT

Latitude 35-45°	Latitude 25-35°
North of Charlotte, N. C., Memphis, Tenn., Bakers- field, Calif.	
July 15-Aug. 1 .....1	Dec. 1-Jan. 31 .....4½
Aug. 1-31 .....2	Feb. 1-28 .....4
Sept. 1-Oct. 31 .....3	March 1-31 .....3
Nov. 1-30 .....4	April 1-30 .....2½
Dec. 1-Jan. 31 .....5	May 1-31 .....1½
Feb. 1-28 .....4	June 1-July 31 .....1
March 1-31 .....3	Aug. 1-31 .....2
April 1-May 15 .....2	Sept. 1-30 .....2½
	Oct. 1-31 .....3½
	Nov. 1-30 .....4



"Igloo" type supports for black sateen. These sateen igloos serve to shorten days on summer-fall crops, also to protect one bed from lights that may be necessary for the bed next to it. Also, they support the lights themselves. To some extent it is possible to maintain different temperatures under the igloo. Many growers prefer individual bed shading—there are advantages both ways.



Shows details of how igloo supports rest on the bench side. The 12 inch piece of angle iron rides on the sideboard, a piece of 1¼ inch pipe is welded to it. The leg of the igloo (1 inch) simply slides down into the 1¼ inch pipe.

Shading Details

Why?—to shorten the length of day thus causing buds to set.

How?—the easiest cheapest way you can figure out to reduce light to less than ½ foot candle from 6 PM to 7 AM. The igloos pictured on this page are the best way we've found. They also support lights, skinner lines, and help maintain desired temperatures in winter. On cloth house crops, the Aster cloth (or Saran) is put on the igloo first, then Sateen on that.

During the hot summer months, shade should not be applied before 6 PM standard time (not daylight). It may be put on at 4 PM (standard time) during spring and fall when heat is no problem. Shade cloth does absolutely no good as far as shortening the day until light under the covers is less than ½ foot candle. If you can ever see enough to read the meter, the light intensity is over ½ f.c. In other words, too much sunlight is leaking through the cover to do any good up to about 6 PM and after 8 AM in the morning—standard time.

DATES TO START AND STOP LIGHT AND SHADE

Latitude 25-35°	Lights		Shade	
	Response Group	Start in Fall Stop in Spring	Start in Spring Stop in Fall	
7-8 Weeks		Continuous	April 8	Sept. 20
9-11 Weeks		Continuous	April 1	Oct. 1

Latitude 35-45°

North of Charlotte, N. C., Memphis, Tenn., Bakersfield, Calif.

Response Group	Lights		Shade	
	Start in Fall	Stop in Spring	Start in Spring	Stop in Fall
7-8 Weeks	July 15	May 30	April 7	Sept. 8
9-11 Weeks	Aug. 1	May 15	March 25	Oct. 1
12-14 Weeks	Aug. 25	April 25	Feb. 25	Oct. 20

Interrupted Lighting. Promising as a means of improvement of spray formation, but not yet practical for the commercial grower in our experience. We are planning further trials of interrupted lighting this winter.

Main problem: difficulty of grouping several varieties together under a common interrupted schedule.

Colors and varieties

First, what % of Spray Types and Standards? The southwest and California lean more to standards at all seasons. For Midwest and East:

	Jan.-April	May-Sept.	Oct.-Dec.
% Spray Types	75	70	60
% Standards	25	30	40

Color percentage of Spray Types

	Jan.-March	April-May	June	July-Aug.	Sept. Oct.	Nov.-Dec.
% White	50	55	60	45	35	40
% Yellow	30	30	30	45	35	25
% Pink	15	15	10	10	5	10
% Bronze	5	—	—	—	25	25

Note: Southern markets seem to prefer less white.

Color percentages of Standards

	Jan.-March	April-May	June	July-Aug.	Sept.-Oct.	Nov.-Dec.
% White	60	55	50	45	35	45
% Yellow	30	30	45	45	45	30
% Pink	10	15	5	—	—	5
% Bronze	—	—	—	10	20	20

Varieties—hundreds of 'em!

Certainly no room to discuss them here. We've flowered over 350 in our continuous flowering test program. You'll find our recommendations for each season in the tables starting on page 17. Also, if you're through Chicago, stop in and see the new ones in our trials—at any period.

Single Stem vs Pinch?

Where time permits, we recommend growing pinched crops.

On year 'round flowering (3 crops a year) operations, in order to realize the 3 crops yearly, it is necessary to grow them single stem. In some cases even a single Mum crop in rotation with other flowers must be grown single stem to fit into the available time.

Single stem crops are somewhat easier to grow. Spray formation on Poms and proper bud set on Standards is more sure. Also, the pinching job and

the problem of varieties that won't break after pinching is eliminated. These problems are accentuated by winter-spring conditions.

Continuous Flowering Schedules

Actually most off-season Mum growing is done on so-called year 'round flowering programs. A given area, usually not less than 6-8 benches is put on a continuous rotation, each bench producing 3 crops during the year. Thus, an 8 bench house would produce 24 benches of flowers each 12 months. The advantages of steady cut, steady return, and even work load are obvious.

Because such programs are nearly always tailor-made to fit local conditions, none are included here. If interested, write our Mum Planning Dept. for details. (See page 16).

About Spacing

All aspects of costs, returns, grading etc., are vitally affected by spacing. No flat rule applies everywhere.

A good starting point: how much premium is your outlet willing to pay for extra quality? The experience of most growers (ours too) is that we net more per sq. ft. for a somewhat smaller Standard (Mum) than we have been growing. No less **quality**, but a jump or two lower on the Cornell weight grade scale is where we want to be.

In Poms, a common comment from single stem growers is: our sprays are so heavy and fine that 4 stems make a bunch. But nobody wants them! They want lighter sprays—6 to a bunch.

In both the above cases, the basic trouble is too much growing area given to each stem. Closer spacing would produce substantially more stems per foot—and of the grade wanted. One grower of standards on his late summer crops went from 6x4 to 6x3 inches. This meant 8 flowers per ft. instead of 6—an increase of 33%. Average returns (per dozen flowers) on the closer spaced crop was only 12% less than for those grown 6x4. He had been growing a higher grade than his market wanted. Dropping a notch or two simply meant more production and more returns per ft.

It's much the same story in Poms. A 6x4 spacing in summer-fall means 6 stems per sq. ft. Under favorable growing conditions such a spacing will often produce sprays averaging 3 oz. If your trade wants 6 stems per bunch, that means you give out 18 oz. per bunch—and cut one bunch per sq. ft.

The same area planted 6x3 will produce 8 medium weight stems per sq. ft. of which 6 will make an acceptable bunch. The grower now realizes 1 1/3 bunches per sq. ft.—33% more bunches from the same area.

One point here: if a substantial percentage of culls appears in a bench, then either the spacing is too close, for that time of year, or else plants are lacking feed, water etc.

Growers practicing weight grading are made more aware of the above points simply because they grade.

It must be realized that closer spacing requires more cuttings, and a little more work at planting time. These are factors that each grower must weigh for himself with an open mind to results in terms of net profit on the crop.

Most of all though, does your present spacing plan under your own growing conditions produce the grade of flowers at each season that your market wants?

Here is the spacing we recommend for northern areas (Standards and Spray Types).

Jan. 1- March 15	March 15- June 1	June 1- Oct. 15	Oct. 15- Jan. 1
6x5	6x4	6x3 1/2	6x4

Note: several commercial growers have reported good results with spacings as much as 20% closer than the above—under favorable growing conditions.

We Acknowledge

With thanks, the substantial help afforded us in preparation of this **Guide** both by our floriculture schools, and by the major propagators.

About Our Ball Mum Planning Service

Just want to let you know that there is a group here at Ball's whose specialty (and sole job) is **helping growers plan mums**.

The service is intended to assist both market and retail growers—mainly with out-of-season crops. Both cut flowers and pot mums are covered. Recommendations prepared by us include full details on lighting, shading, spacing and selection of varieties. Scheduling of continuous flowering of both pot mums and cut flowers is included.

Available at no charge to Ball mum customers.

Advantages

1. The experience and training of mum **specialists** is available to you. In charge is Jack McCluskie, graduate of Penn. State Floriculture School. Jack has been devoting full time for several years to our mum variety testing program here, to general improvement of offseason

techniques, and to our Planning Service. The lifetime of experience of the Ball organization, as commercial cut flower growers, stands behind this service.

2. **Variety selection** is the really critical task. With over 300 varieties available, and with only a very few actually suitable in your section for each season, the problem is not simple. We have flowered all varieties potentially usable at each season on our own range. Furthermore, we "trial" the new ones each year at various flowering periods. From this comprehensive view of the problem, we feel our Ball Planning Service is well-grounded for variety selection.

Interested?

Many growers in all sections of the country have been using this service. It might well be of help to **you** in setting up a mum program.

Write for details, attention Mum Planning Service, Geo. J. Ball, Inc., West Chicago, Ill.



Mum variety testing—and note-taking at Ball's. This continuous trialing of varieties is really the basis on which our Ball Mum Planning Service works. Left, Jack McCluskie; right, Vic Ball.

**FOR GROWERS
IN THIS AREA**

40-45° LATITUDE

**USE SCHEDULES
BELOW (Thru page 21).**



Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Nov. 26	Dec. 24	Nov. 26-Feb. 7	Feb. 8	Mar. 15	Apr. 19
Dec. 3	Dec. 31	Dec. 3-Feb. 14	Feb. 15	Mar. 15	Apr. 26
Dec. 17	Jan. 14	Dec. 17-Feb. 21	Feb. 22	Mar. 15	May 3
Dec. 24	Jan. 21	Dec. 24-Feb. 28	Mar. 1	Mar. 15	May 10
Jan. 7	Feb. 4	Jan. 7-Mar. 7	Mar. 8	Mar. 15	May 17
Jan. 14	Feb. 11	Jan. 14-Mar. 14	Mar. 15	Mar. 15	May 24
Jan. 21	Feb. 18	Jan. 21-Mar. 21	Mar. 22	Mar. 22	May 31

VARIETIES for above schedules

Standards

White
Ind. White*
Queen's Lace*
Jean Elizabeth

Yellow
Imp. Ind. Yellow*
Yellow Lace*
Ind. Yellow

Pink
Ind. Pink
Dk. Orchid Queen

Bronze
(Bronze not recommended for this period)

Spray Types

White
Keepsake*
Shasta*
Pinocchio
Ill. Snowdrift
White Popcorn
White Mensa
Halo
Pristine

Yellow
Mary L. Hall*
Yellow Shasta*
Gold Coast
Golden Mensa

Pink
Masterpiece*
Linda Lou
Memorial
Reward

Bronze
(Bronze not recommended for this period)

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Feb. 4	Mar. 4	Feb. 4-Mar. 28	Mar. 29	Mar. 29	June 7
Feb. 11	Mar. 11	Feb. 11-Apr. 4	Apr. 5	Apr. 5	June 14
Feb. 25	Mar. 25	Feb. 25-Apr. 11	Apr. 12	Apr. 12	June 21
Mar. 4	Apr. 1	Mar. 4-Apr. 18	Apr. 19	Apr. 19	June 28

VARIETIES for above schedules

Standards

White
Giant Betsy Ross*
Betsy Ross
Queen's Lace

Yellow
Good News*
Yellow Lace

Pink
Dk. Orchid Queen

Bronze
(Bronze not recommended for this period)

Spray Types

White
Keepsake*
Popcorn*
Ill. Snowdrift
Shasta
Pinocchio
Songster
White Mensa
Halo
Madonna

Yellow
Gold Coast*
Golden Herald*
Crescendo
Sunup
Mary Hall
Starbright

Pink
Reward*
Linda Lou
Pandora
Jessie
Memorial

Bronze
Rubicon*
Buccaneer

*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 40-45°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
	Mar. 11	Apr. 8	Mar. 11-Apr. 25	Apr. 26	Apr. 26	July 5
	Mar. 18	Apr. 15	Mar. 18-Apr. 30	May 1	May 3	July 12
	Mar. 25	Apr. 22	Mar. 25-Apr. 30	May 1	May 10	July 19
	Apr. 1	Apr. 29	Apr. 1-Apr. 30	May 1	May 17	July 26
	Apr. 8	May 6	Apr. 8-Apr. 30	May 1	May 24	Aug. 2
	Apr. 15	May 13	Apr. 15-Apr. 30	May 1	May 31	Aug. 9
	Apr. 22	May 20	Apr. 22-Apr. 30	May 1	June 7	Aug. 16
	Apr. 29	May 27	Apr. 29-Apr. 30	May 1	June 14	Aug. 23
	May 6	June 3	No	—	June 21	Aug. 30
	May 20	June 10	No	—	June 28	Sept. 6
	May 27	June 17	No	—	July 5	Sept. 13
	May 27	June 17	No	—	July 12	Sept. 20
	June 3	June 24	No	—	July 19	Sept. 27
Spray Types	June 3	June 24	No	—	July 19	Oct. 4
Standards	June 3	June 24	No	—	July 26	Oct. 4
Spray Types	June 10	July 1	No	—	July 26	Oct. 11
Standards	June 10	July 1	Aug. 1	Aug. 2	Aug. 2	Oct. 11

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Queen's Lace

Yellow

Good News*
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
(after Aug. 15)

Spray Types

White

Keepsake*
(to July 15)
Popcorn*
(July 16 on)
Ill. Snowdrift
Shasta
Pinocchio
Songster
White Mensa
Halo
Madonna

Yellow

Gold Coast*
Golden Herald*
Crescendo
(July 1-Aug. 31)
Sunup
(July 1-Aug. 31)
Mary Hall
Starbright

Pink

Reward*
Linda Lou
Pandora
Jessie
Memorial

Bronze

Chevron* (July)
Rubicon*
Beauregard* (Sept)
Buckskin
(July 1-Aug. 31)
Buccaneer

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	June 10	July 1	Aug. 1	Aug. 2	Aug. 2	Oct. 18
Standards	June 10	July 1	Aug. 1-Aug. 8	Aug. 9	Aug. 9	Oct. 18
Spray Types	June 17	July 8	Aug. 1-Aug. 8	Aug. 9	Aug. 9	Oct. 25
Standards	June 17	July 8	Aug. 1-Aug. 15	Aug. 16	Aug. 16	Oct. 25
Spray Types	June 24	July 15	Aug. 1-Aug. 15	Aug. 16	Aug. 16	Nov. 1
Standards	June 24	July 15	Aug. 1-Aug. 22	Aug. 23	Aug. 23	Nov. 1

VARIETIES for above schedules

Standards

White

Ind. White*
Jean Elizabeth
Queen's Lace

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy*
Detroit News

Spray Types

White

Shasta*
Encore*
Little America
Ill. Snowdrift
Dynamo
Moonglow
Paramount*
Priscilla*

Yellow

Yellow Shasta*
Lollipop*
Golden Chord*
Yellow Paramount
Pippin
Klondike
Bojangles

Pink

Linda Lou*
Soprano
Pandora
Minuet

Bronze

Beauregard*
Rubicon*
Paragon
Chevron
Rusticon*
Festival*

*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 40-45°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	July 1	July 22	Aug. 1-Aug. 22	Aug. 23	Aug. 23	Nov. 8
Standards	July 1	July 22	Aug. 1-Aug. 29	Aug. 30	Aug. 30	Nov. 8
Spray Types	July 8	July 29	Aug. 1-Aug. 29	Aug. 30	Aug. 30	Nov. 15
Standards	July 8	July 29	Aug. 1-Sept. 5	Sept. 6	Sept. 6	Nov. 15
Spray Types	July 15	Aug. 5	Aug. 1-Sept. 5	Sept. 6	Sept. 6	Nov. 22
Standards	July 15	Aug. 5	Aug. 1-Sept. 12	Sept. 13	Sept. 13	Nov. 22
Spray Types	July 22	Aug. 12	Aug. 1-Sept. 12	Sept. 13	Sept. 13	Nov. 29
Standards	July 22	Aug. 12	Aug. 1-Sept. 19	Sept. 20	Sept. 20	Nov. 29

VARIETIES for above schedules

Standards

White

Ind. White*
Jean Elizabeth
Queen's Lace

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy*
Detroit News

Spray Types

White

Shasta*
Encore*
Little America
Ill. Snowdrift
Dynamo
Moonglow
Paramount*
Priscilla*

Yellow

Yellow Shasta*
Lollipop*
Golden Chord*
Yellow Paramount
Pippin
Klondike
Bojangles

Pink

Linda Lou*
Soprano
Pandora
Minuet

Bronze

Beauregard*
Rubicon*
Paragon
Chevron
Rusticon*
Festival*

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	July 22	Aug. 12	Aug. 1-Aug. 29	Aug. 30	Aug. 30	Dec. 6
Standards	July 22	Aug. 12	Aug. 1-Sept. 26	Sept. 27	No	Dec. 6
Spray Types	July 29	Aug. 19	Aug. 1-Sept. 5	Sept. 6	Sept. 6	Dec. 13
Standards	July 29	Aug. 19	Aug. 1-Oct. 3	Oct. 4	No	Dec. 13
Spray Types	Aug. 5	Aug. 26	Aug. 5-Sept. 12	Sept. 13	Sept. 13	Dec. 20
Standards	Aug. 5	Aug. 26	Aug. 5-Oct. 10	Oct. 11	No	Dec. 20
Spray Types	Aug. 12	Sept. 2	Aug. 12-Sept. 19	Sept. 20	Sept. 20	Dec. 27
Standards	Aug. 12	Sept. 2	Aug. 12-Oct. 17	Oct. 18	No	Dec. 27

VARIETIES for above schedules

Standards

White

Ind. White*
Jean Elizabeth
Queen's Lace

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy*
Detroit News

Spray Types

White

Silversmith*
Snowcrest
Snowcap
Acclaim
Yukon

Yellow

Golden Anniversary
Sequin
Siren
Corsair*
Cinderella*

Pink

Riviera
Debutante*
Minstrel

Bronze

Bronze Riviera
Merrymaker



PIPPIN

Deep lemon formal pompon recommended for November flowering.
Very heavy producer!

*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 40-45°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	Aug. 12	Sept. 2	Aug. 12-Sept. 26	Sept. 27	Sept. 27	Jan. 3
Standards	Aug. 12	Sept. 2	Aug. 12-Oct. 17	Oct. 18	No	Jan. 3
Spray Types	Aug. 19	Sept. 9	Aug. 19-Oct. 3	Oct. 4	Oct. 4	Jan. 10
Standards	Aug. 19	Sept. 9	Aug. 19-Oct. 24	Oct. 25	No	Jan. 10
Spray Types	Aug. 19	Sept. 9	Aug. 19-Oct. 10	Oct. 11	Oct. 11	Jan. 17
Standards	Aug. 19	Sept. 9	Aug. 19-Oct. 31	Nov. 1	No	Jan. 17
Spray Types	Aug. 26	Sept. 16	Aug. 26-Oct. 17	Oct. 18	Oct. 18	Jan. 24
Standards	Aug. 26	Sept. 16	Aug. 26-Nov. 7	Nov. 8	No	Jan. 24
Spray Types	Sept. 2	Sept. 23	Sept. 2-Oct. 24	Oct. 25	No	Jan. 31
Standards	Sept. 2	Sept. 23	Sept. 2-Nov. 14	Nov. 15	No	Jan. 31
Spray Types	Sept. 9	Sept. 30	Sept. 9-Oct. 31	Nov. 1	No	Feb. 7
Standards	Sept. 9	Sept. 30	Sept. 9-Nov. 21	Nov. 22	No	Feb. 7
Spray Types	Sept. 9	Oct. 7	Sept. 9-Nov. 7	Nov. 8	No	Feb. 14
Standards	Sept. 9	Oct. 7	Sept. 9-Nov. 28	Nov. 29	No	Feb. 14
Spray Types	Sept. 16	Oct. 14	Sept. 16-Nov. 14	Nov. 15	No	Feb. 21
Standards	Sept. 16	Oct. 14	Sept. 16-Dec. 5	Dec. 6	No	Feb. 21
Spray Types	Sept. 23	Oct. 21	Sept. 23-Nov. 21	Nov. 22	No	Feb. 28
Standards	Sept. 23	Oct. 21	Sept. 23-Dec. 12	Dec. 13	No	Feb. 28

VARIETIES for above schedules

Standards

White

Mefo*
Ind. White
Queen's Lace

Yellow

Yellow Mefo*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Ed. Seidewitz
Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News
Ind. Bronze

Spray Types

White

Silversmith*
Snowcrest
Snowcap
Acclaim
Yukon

Yellow

Golden Anniversary
Sequin
Siren
Corsair*
Cinderella*

Pink

Riviera
Debutante*
Minstrel

Bronze

Bronze Riviera
Merrymaker

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	Sept. 30	Oct. 28	Sept. 30-Dec. 5	Dec. 6	No	Mar. 7
Standards	Sept. 30	Oct. 28	Sept. 30-Dec. 19	Dec. 20	No	Mar. 7
Spray Types	Oct. 7	Nov. 4	Oct. 7-Dec. 12	Dec. 13	No	Mar. 14
Standards	Oct. 7	Nov. 4	Oct. 7-Dec. 26	Dec. 27	No	Mar. 14

VARIETIES for above schedules

Standards

White

Mefo*
Ind. White
Queen's Lace

Yellow

Yellow Mefo*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Ed. Seidewitz
Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News
Ind. Bronze

Spray Types

White

Acclaim*
Yukon
Fortune
Belray

Yellow

Corsair*
Cinderella*
Omega

Pink

Debutante*
Heritage

Bronze

(Bronze not recommended for this period)

*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 40-45°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	Oct. 14	Nov. 11	Oct. 14-Jan. 2	Jan. 3	No	Mar. 21
Standards	Oct. 14	Nov. 11	Oct. 14-Jan. 9	Jan. 10	No	Mar. 21
Spray Types	Oct. 21	Nov. 18	Oct. 21-Jan. 9	Jan. 10	No	Mar. 28
Standards	Oct. 21	Nov. 18	Oct. 21-Jan. 16	Jan. 17	No	Mar. 28

VARIETIES for above schedules

Standards

White
Mefo*
Ind. White
Queen's Lace

Yellow
Yellow Mefo*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink
Ed. Seidewitz
Dk. Orchid Queen

Bronze
Mrs. Roy
Detroit News
Ind. Bronze

Spray Types

White
Priscilla
Paramount
Shasta*
White Mensa

Yellow
Lollipop*
Pippin
Yellow Shasta*
Golden Mensa

Pink
Almega
Minuet
Masterpiece*

Bronze
(Bronze not recommended for this period)

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
	Nov. 4	Dec. 2	Nov. 4-Jan. 23	Jan. 24	Mar. 15	Apr. 4
	Nov. 11	Dec. 9	Nov. 11-Jan. 30	Jan. 31	Mar. 15	Apr. 11

VARIETIES for above schedules

Standards

White
Ind. White*
Queen's Lace*
Jean Elizabeth

Yellow
Imp. Ind. Yellow*
Yellow Lace*
Ind. Yellow

Pink
Ind. Pink
Dk. Orchid Queen

Bronze
(Bronze not recommended for this period)

Spray Types

White
Keepsake*
Shasta*
Pinocchio
Ill. Snowdrift
White Popcorn
White Mensa
Halo
Pristina

Yellow
Mary L. Hall*
Yellow Shasta*
Gold Coast
Golden Mensa

Pink
Masterpiece*
Linda Lou
Memorial
Reward

Bronze
(Bronze not recommended for this period)

A typical "3-crops-a-year" planting—as seen at our range. Note at far left the next crop, just coloring up. Other plantings in the house (not in the photo) are in earlier stages of development. Each bench produces three crops each year; with eight benches in the program, the grower will cut into a new bench about every two weeks 'round the year. In the foreground: Vic Ball.



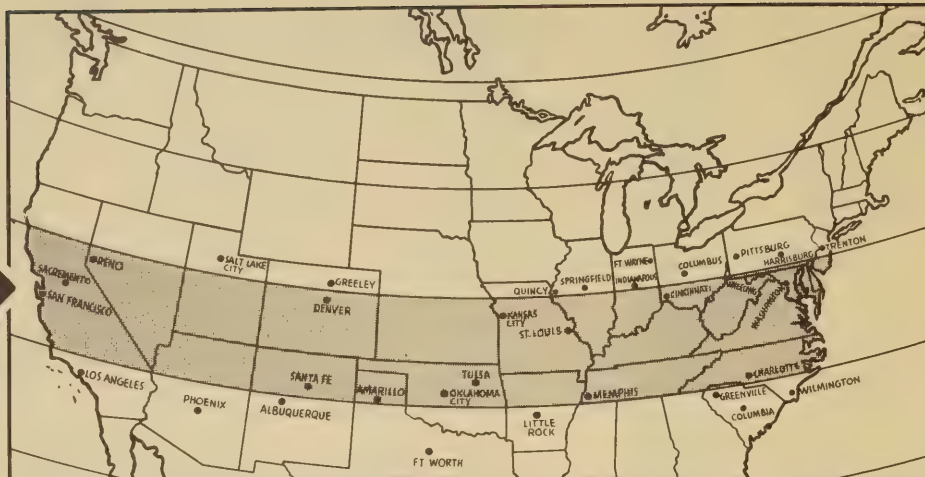
*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

35-40° LATITUDE

**FOR GROWERS
IN THIS AREA**

USE SCHEDULES
BELOW (Thru page 26).



Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Dec. 3	Dec. 31	Dec. 3-Feb. 7	Feb. 8	Mar. 15	Apr. 19
Dec. 10	Jan. 7	Dec. 10-Feb. 14	Feb. 15	Mar. 15	Apr. 26
Dec. 24	Jan. 21	Dec. 24-Feb. 21	Feb. 22	Mar. 15	May 3
Dec. 31	Jan. 28	Dec. 31-Feb. 28	Mar. 1	Mar. 15	May 10
Jan. 14	Feb. 11	Jan. 14-Mar. 7	Mar. 8	Mar. 15	May 17
Jan. 21	Feb. 18	Jan. 21-Mar. 14	Mar. 15	Mar. 15	May 24
Jan. 28	Feb. 25	Jan. 28-Mar. 21	Mar. 22	Mar. 22	May 31

VARIETIES for above schedules

Standards

White

Ind. White*
Queen's Lace*
Jean Elizabeth

Yellow

Imp. Ind. Yellow*
Yellow Lace*
Ind. Yellow

Pink

Ind. Pink
Dk. Orchid Queen

Bronze

(Bronze not recommended for this period)

Spray Types

White

Keepsake*
Shasta*
Pinocchio
Ill. Snowdrift
White Popcorn
White Mensa
Halo
Pristine

Yellow

Mary L. Hall*
Yellow Shasta*
Gold Coast
Golden Mensa

Pink

Masterpiece*
Linda Lou
Memorial
Reward

Bronze

(Bronze not recommended for this period)

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Feb. 11	Mar. 11	Feb. 11-Mar. 28	Mar. 29	Mar. 29	June 7
Feb. 18	Mar. 18	Feb. 18-Apr. 4	Apr. 5	Apr. 5	June 14
Feb. 25	Mar. 25	Feb. 25-Apr. 11	Apr. 12	Apr. 12	June 21
Mar. 4	Apr. 1	Mar. 4-Apr. 18	Apr. 19	Apr. 19	June 28

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Queen's Lace

Yellow

Good News*
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy

Spray Types

White

Keepsake*
Ill. Snowdrift
Shasta
Pinocchio
Songster
White Mensa
Halo
Madonna

Yellow

Gold Coast*
Golden Herald*
Mary Hall
Starbright

Pink

Reward*
Linda Lou
Pandora
Jessie
Memorial

Bronze

Rubicon*
Buccaneer

*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 35-40°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
	Mar. 11	Apr. 8	Mar. 11-Apr. 25	Apr. 26	Apr. 26	July 5
	Mar. 18	Apr. 15	Mar. 18-May 2	May 3	May 3	July 12
	Mar. 25	Apr. 22	Mar. 25-May 9	May 10	May 10	July 19
	Apr. 1	Apr. 29	Apr. 1-May 14	May 15	May 17	July 26
	Apr. 8	May 6	Apr. 8-May 14	May 15	May 24	Aug. 2
	Apr. 15	May 13	Apr. 15-May 14	May 15	May 31	Aug. 9
	Apr. 22	May 20	Apr. 22-May 14	May 15	June 7	Aug. 16
	Apr. 29	May 27	Apr. 29-May 14	May 15	June 14	Aug. 23
	May 6	June 3	May 6-May 14	May 15	June 21	Aug. 30
	May 20	June 10	No	—	June 28	Sept. 6
	May 27	June 17	No	—	July 5	Sept. 13
	June 3	June 24	No	—	July 12	Sept. 20
	June 10	July 1	No	—	July 19	Sept. 27
Spray Types	June 10	July 1	No	—	July 19	Oct. 4
Standards	June 10	July 1	No	—	July 26	Oct. 4
Spray Types	June 17	July 8	No	—	July 26	Oct. 11
Standards	June 17	July 8	Aug. 1	Aug. 2	Aug. 2	Oct. 11

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Queen's Lace

Yellow

Good News*
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
(after Aug. 15)

Spray Types

White

Keepsake*
(to July 15)
Popcorn*
(July 16 on)
Ill. Snowdrift
Shasta
Pinocchio
Songster
White Mensa
Halo
Madonna

Yellow

Gold Coast*
Golden Herald*
Crescendo
(July 1-Aug. 31)
Sunup
(July 1-Aug. 31)
Mary Hall
Starbright

Pink

Reward*
Linda Lou
Pandora
Jessie
Memorial

Bronze

Chevron* (July)
Rubicon*
Beauregard* (Sept.)
Buckskin
(July 1-Aug. 31)
Buccaneer

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	June 17	July 8	Aug. 1	Aug. 2	Aug. 2	Oct. 18
Standards	June 17	July 8	Aug. 1-Aug. 8	Aug. 9	Aug. 9	Oct. 18
Spray Types	June 24	July 15	Aug. 1-Aug. 8	Aug. 9	Aug. 9	Oct. 25
Standards	June 24	July 15	Aug. 1-Aug. 15	Aug. 16	Aug. 16	Oct. 25
Spray Types	July 1	July 22	Aug. 1-Aug. 15	Aug. 16	Aug. 16	Nov. 1
Standards	July 1	July 22	Aug. 1-Aug. 22	Aug. 23	Aug. 23	Nov. 1

VARIETIES for above schedules

Standards

White

Ind. White*
Jean Elizabeth
Queen's Lace

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy*
Detroit News

Spray Types

White

Shasta*
Encore*
Little America
Ill. Snowdrift
Dynamo
Moonglow
Paramount*
Priscilla*

Yellow

Yellow Shasta*
Lollipop*
Golden Chord*
Yellow Paramount
Pippin
Klondike
Bojangles

Pink

Linda Lou*
Soprano
Pandora
Minuet

Bronze

Beauregard*
Rubicon*
Paragon
Chevron
Rusticon*
Festival*

*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 35-40°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	July 8	July 29	Aug. 1-Aug. 22	Aug. 23	Aug. 23	Nov. 8
Standards	July 8	July 29	Aug. 1-Aug. 29	Aug. 30	Aug. 30	Nov. 8
Spray Types	July 15	Aug. 5	Aug. 1-Aug. 29	Aug. 30	Aug. 30	Nov. 15
Standards	July 15	Aug. 5	Aug. 1-Sept. 5	Sept. 6	Sept. 6	Nov. 15
Spray Types	July 22	Aug. 12	Aug. 1-Sept. 5	Sept. 6	Sept. 6	Nov. 22
Standards	July 22	Aug. 12	Aug. 1-Sept. 12	Sept. 13	Sept. 13	Nov. 22
Spray Types	July 29	Aug. 19	Aug. 1-Sept. 12	Sept. 13	Sept. 13	Nov. 29
Standards	July 29	Aug. 19	Aug. 1-Sept. 19	Sept. 20	Sept. 20	Nov. 29

VARIETIES for above schedules

Standards

White

Ind. White*
Jean Elizabeth
Queen's Lace

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy*
Detroit News

Spray Types

White

Shasta*
Encore*
Little America
Ill. Snowdrift
Dynamo
Moonglow
Paramount*
Priscilla*

Yellow

Yellow Shasta*
Lollipop*
Golden Chord*
Yellow Paramount
Pippin
Klondike
Bojangles

Pink

Linda Lou*
Soprano
Pandora
Minuet

Bronze

Beauregard*
Rubicon*
Paragon
Chevron
Rusticon*
Festival*

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	July 29	Aug. 19	Aug. 1-Aug. 29	Aug. 30	Aug. 30	Dec. 6
Standards	July 29	Aug. 19	Aug. 1-Sept. 26	Sept. 27	No	Dec. 6
Spray Types	Aug. 5	Aug. 26	Aug. 5-Sept. 5	Sept. 6	Sept. 6	Dec. 13
Standards	Aug. 5	Aug. 26	Aug. 5-Oct. 3	Oct. 4	No	Dec. 13
Spray Types	Aug. 12	Sept. 2	Aug. 12-Sept. 12	Sept. 13	Sept. 13	Dec. 20
Standards	Aug. 12	Sept. 2	Aug. 12-Oct. 10	Oct. 11	No	Dec. 20
Spray Types	Aug. 19	Sept. 9	Aug. 19-Sept. 19	Sept. 20	Sept. 20	Dec. 27
Standards	Aug. 19	Sept. 9	Aug. 19-Oct. 17	Oct. 18	No	Dec. 27

VARIETIES for above schedules

Standards

White

Ind. White*
Jean Elizabeth
Queen's Lace

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy*
Detroit News

Spray Types

White

Silversmith*
Snowcrest
Snowcap
Acclaim
Yukon

Yellow

Golden Anniversary
Sequin
Siren
Corsair*
Cinderella*

Pink

Riviera
Debutante*
Minstrel

Bronze

Bronze Riviera
Merrymaker



FESTIVAL

A bright orange red for Thanksgiving. Normal flowering date: Nov. 23. Stocky grower; good producer.

*Very best for the period

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 35-40°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	Aug. 19	Sept. 9	Aug. 19-Sept. 26	Sept. 27	Sept. 27	Jan. 3
Standards	Aug. 19	Sept. 9	Aug. 19-Oct. 24	Oct. 25	No	Jan. 3
Spray Types	Aug. 26	Sept. 16	Aug. 26-Oct. 3	Oct. 4	Oct. 4	Jan. 10
Standards	Aug. 26	Sept. 16	Aug. 26-Oct. 31	Nov. 1	No	Jan. 10
Spray Types	Aug. 26	Sept. 16	Aug. 26-Oct. 10	Oct. 11	Oct. 11	Jan. 17
Standards	Aug. 26	Sept. 16	Aug. 26-Oct. 31	Nov. 1	No	Jan. 17
Spray Types	Sept. 2	Sept. 23	Sept. 2-Oct. 17	Oct. 18	Oct. 18	Jan. 24
Standards	Sept. 2	Sept. 23	Sept. 2-Nov. 7	Nov. 8	No	Jan. 24
Spray Types	Sept. 9	Sept. 30	Sept. 9-Oct. 24	Oct. 25	No	Jan. 31
Standards	Sept. 9	Sept. 30	Sept. 9-Nov. 14	Nov. 15	No	Jan. 31
Spray Types	Sept. 9	Oct. 7	Sept. 9-Oct. 31	Nov. 1	No	Feb. 7
Standards	Sept. 9	Oct. 7	Sept. 9-Nov. 21	Nov. 22	No	Feb. 7
Spray Types	Sept. 16	Oct. 14	Sept. 16-Nov. 7	Nov. 8	No	Feb. 14
Standards	Sept. 16	Oct. 14	Sept. 16-Nov. 28	Nov. 29	No	Feb. 14
Spray Types	Sept. 23	Oct. 21	Sept. 23-Nov. 14	Nov. 15	No	Feb. 21
Standards	Sept. 23	Oct. 21	Sept. 23-Dec. 5	Dec. 6	No	Feb. 21
Spray Types	Sept. 30	Oct. 28	Sept. 30-Nov. 21	Nov. 22	No	Feb. 28
Standards	Sept. 30	Oct. 28	Sept. 30-Dec. 12	Dec. 13	No	Feb. 28

VARIETIES for above schedules

Standards

White

Mefo*

Ind. White

Queen's Lace

Yellow

Yellow Mefo*

Imp. Ind. Yellow

Ind. Yellow

Yellow Lace

Pink

Ed. Seidewitz

Dk. Orchid Queen

Bronze

Mrs. Roy

Detroit News

Ind. Bronze

Spray Types

White

Silversmith*

Snowcrest

Snowcap

Acclaim

Yukon

Yellow

Golden Anniversary

Sequin

Siren

Corsair*

Cinderella*

Pink

Riviera

Debutante*

Minstrel

Bronze

Bronze Riviera

Merrymaker

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	Oct. 7	Nov. 4	Oct. 7-Dec. 5	Dec. 6	No	Mar. 7
Standards	Oct. 7	Nov. 4	Oct. 7-Dec. 26	Dec. 27	No	Mar. 7
Spray Types	Oct. 14	Nov. 11	Oct. 14-Dec. 12	Dec. 13	No	Mar. 14
Standards	Oct. 14	Nov. 11	Oct. 14-Jan. 2	Jan. 3	No	Mar. 14

VARIETIES for above schedules

Standards

White

Mefo*

Ind. White

Queen's Lace

Yellow

Yellow Mefo*

Imp. Ind. Yellow

Ind. Yellow

Yellow Lace

Pink

Ed. Seidewitz

Dk. Orchid Queen

Bronze

Mrs. Roy

Detroit News

Ind. Bronze

Spray Types

White

Acclaim*

Yukon

Fortune

Belray

Yellow

Corsair*

Cinderella*

Omega

Pink

Debutante*

Heritage

Bronze

(Bronze not recommended for this period)

*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.



A typical continuous flowering program; center foreground: Jean Elizabeth; to rear: Indianapolis White.

FOR GROWERS IN LATITUDES 35-40°

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Spray Types	Oct. 21	Nov. 18	Oct. 21-Jan. 2	Jan. 3	No	Mar. 21
Standards	Oct. 21	Nov. 18	Oct. 21-Jan. 9	Jan. 10	No	Mar. 21
Spray Types	Oct. 28	Nov. 25	Oct. 28-Jan. 9	Jan. 10	No	Mar. 28
Standards	Oct. 28	Nov. 25	Oct. 28-Jan. 16	Jan. 17	No	Mar. 28

VARIETIES for above schedules

Standards

White
Mefo*
Ind. White
Queen's Lace

Yellow
Yellow Mefo*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink
Ed. Seidewitz
Dk. Orchid Queen

Bronze
Mrs. Roy
Detroit News
Ind. Bronze

Spray Types

White
Priscilla
Paramount
Shasta*
White Mensa

Yellow
Lollipop
Pippin
Yellow Shasta*
Golden Mensa

Pink
Almega
Minuet
Masterpiece*

Bronze
(Bronze not recommended for this period)

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
	Nov. 11	Dec. 9	Nov. 11-Jan. 23	Jan. 24	Mar. 15	Apr. 4
	Nov. 18	Dec. 16	Nov. 18-Jan. 30	Jan. 31	Mar. 15	Apr. 11

VARIETIES for above schedules

Standards

White
Ind. White*
Queen's Lace*
Jean Elizabeth

Yellow
Imp. Ind. Yellow*
Yellow Lace*
Ind. Yellow

Pink
Ind. Pink
Dk. Orchid Queen

Bronze
(Bronze not recommended for this period)

Spray Types

White
Keepsake*
Shasta*
Pinocchio
Ill. Snowdrift
White Popcorn
White Mensa
Halo
Pristine

Yellow
Mary L. Hall*
Yellow Shasta*
Gold Coast
Golden Mensa

Pink
Masterpiece*
Linda Lou
Memorial
Reward

Bronze
(Bronze not recommended for this period)

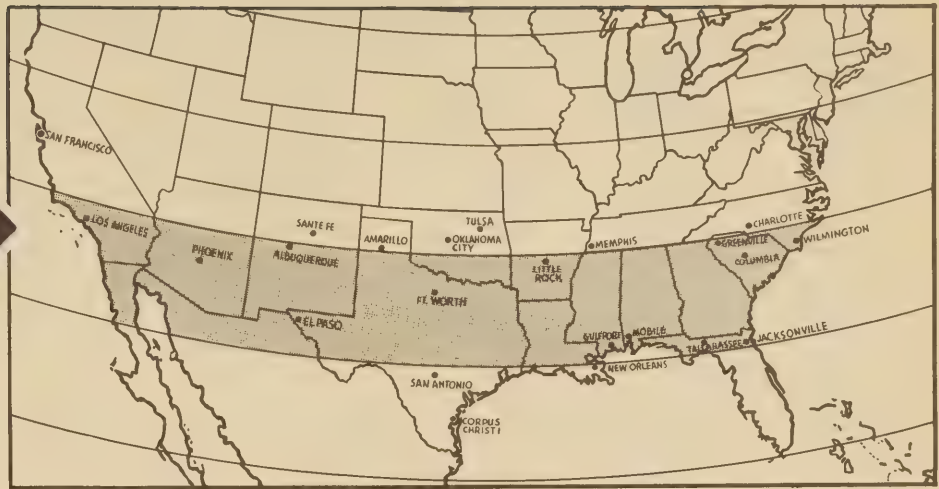
*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN THIS AREA

30-35° LATITUDE

USE SCHEDULES
BELOW (Thru page 29).



Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
1953	1954				
Dec. 10	Jan. 7	Dec. 10-Feb. 7	Feb. 8	Mar. 15	Apr. 19
Dec. 17	Jan. 14	Dec. 17-Feb. 14	Feb. 15	Mar. 15	Apr. 26
Dec. 31	Jan. 28	Dec. 31-Feb. 21	Feb. 22	Mar. 15	May 3
1954					
Jan. 7	Feb. 4	Jan. 7-Feb. 28	Mar. 1	Mar. 15	May 10
Jan. 21	Feb. 18	Jan. 21-Mar. 7	Mar. 8	Mar. 15	May 17
Jan. 28	Feb. 25	Jan. 28-Mar. 14	Mar. 15	Mar. 15	May 24
Feb. 4	Mar. 4	Feb. 4-Mar. 21	Mar. 22	Mar. 22	May 31
Feb. 11	Mar. 11	Feb. 11-Mar. 28	Mar. 29	Mar. 29	June 7
Feb. 18	Mar. 18	Feb. 18-Apr. 4	Apr. 5	Apr. 5	June 14
Feb. 25	Mar. 25	Feb. 25-Apr. 11	Apr. 12	Apr. 12	June 21
Mar. 4	Apr. 1	Mar. 4-Apr. 18	Apr. 19	Apr. 19	June 28
Mar. 11	Apr. 8	Mar. 11-Apr. 25	Apr. 26	Apr. 26	July 5
Mar. 18	Apr. 15	Mar. 18-May 2	May 3	May 3	July 12
Mar. 25	Apr. 22	Mar. 25-May 9	May 10	May 10	July 19
Apr. 1	Apr. 29	Apr. 1-May 16	May 17	May 17	July 26
Apr. 8	May 6	Apr. 8-May 23	May 24	May 24	Aug. 2
Apr. 15	May 13	Apr. 15-May 30	May 31	May 31	Aug. 9
Apr. 29	May 20	Apr. 29-June 6	June 7	June 7	Aug. 16
May 6	May 27	May 6-June 13	June 14	June 14	Aug. 23
May 13	June 3	May 13-June 20	June 21	June 21	Aug. 30
May 20	June 10	May 20-June 27	June 28	June 28	Sept. 6
May 27	June 17	May 27-July 4	July 5	July 5	Sept. 13
June 3	June 24	June 3-July 11	July 12	July 12	Sept. 20
June 10	July 1	June 10-July 18	July 19	July 19	Sept. 27
June 10	July 1	June 10-July 25	July 26	July 26	Oct. 4
June 17	July 8	June 17-Aug. 1	Aug. 2	Aug. 2	Oct. 11
June 17	July 8	June 17-Aug. 8	Aug. 9	Aug. 9	Oct. 18
June 24	July 15	June 24-Aug. 15	Aug. 16	Aug. 16	Oct. 25

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Ind. White
Queen's Lace

Yellow

Good News*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News
(not for
June-Aug.)

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta*
(fades June 1-Oct. 1)
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

extra
nice for
July &
Aug.

Pink

Pandora*
Linda Lou*
Taffeta (to June 15)
Ballerina (June 15)
Reward } extra nice for
Pink Dot } July & Aug.

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin
(extra nice for
July & Aug.)

*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 30-35°

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
July 1	July 22	July 1-Aug. 22	Aug. 23	Aug. 23	Nov. 1
July 8	July 29	July 8-Aug. 29	Aug. 30	Aug. 30	Nov. 8
July 15	Aug. 5	July 15-Sept. 5	Sept. 6	Sept. 6	Nov. 15
July 22	Aug. 12	July 22-Sept. 12	Sept. 13	Sept. 13	Nov. 22
July 29	Aug. 19	July 29-Sept. 19	Sept. 20	No	Nov. 29

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Ind. White
Queen's Lace

Yellow

Good News*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News
(not for
June-Aug.)

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta*
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

Pink

Pandora*
Linda Lou*
Taffeta
Ballerina
Reward
Pink Dot

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin

	Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
	July 29	Aug. 19	July 29-Sept. 26	Sept. 27	No	Dec. 6
	Aug. 5	Aug. 26	Aug. 5-Oct. 3	Oct. 4	No	Dec. 13
	Aug. 19	Sept. 9	Aug. 19-Oct. 10	Oct. 11	No	Dec. 20
	Aug. 26	Sept. 16	Aug. 26-Oct. 17	Oct. 18	No	Dec. 27
Spray Types	Aug. 26	Sept. 16	Aug. 26-Oct. 17	Oct. 18	No	Jan. 3
Standards	Aug. 26	Sept. 16	Aug. 26-Oct. 24	Oct. 25	No	Jan. 3
Spray Types	Sept. 2	Sept. 23	Sept. 2-Oct. 24	Oct. 25	No	Jan. 10
Standards	Sept. 2	Sept. 23	Sept. 2-Oct. 31	Nov. 1	No	Jan. 10

VARIETIES for above schedules

Standards

White

Ind. White*
Mefo* (after Dec. 31)
Queen's Lace
Jean Elizabeth

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Mefo*
Yellow Lace

Pink

Dk. Orchid Queen*
Ind. Pink

Bronze

Mrs. Roy

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta*
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

Pink

Pandora*
Linda Lou*
Taffeta
Ballerina
Reward
Pink Dot

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin

*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 30-35°

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Sept. 2	Sept. 23	Sept. 2-Oct. 31	Nov. 1	No	Jan. 17
Sept. 9	Sept. 30	Sept. 9-Nov. 7	Nov. 8	No	Jan. 24
Sept. 16	Oct. 7	Sept. 16-Nov. 14	Nov. 15	No	Jan. 31
Sept. 23	Oct. 14	Sept. 23-Nov. 21	Nov. 22	No	Feb. 7
Sept. 30	Oct. 21	Sept. 30-Nov. 28	Nov. 29	No	Feb. 14
Oct. 7	Oct. 28	Oct. 7-Dec. 5	Dec. 6	No	Feb. 21
Oct. 14	Nov. 4	Oct. 14-Dec. 12	Dec. 13	No	Feb. 28
Oct. 14	Nov. 11	Oct. 14-Dec. 19	Dec. 20	No	Mar. 7
Oct. 21	Nov. 18	Oct. 21-Dec. 26	Dec. 27	No	Mar. 14
Oct. 28	Nov. 25	Oct. 28-Jan. 2	Jan. 3	No	Mar. 21
Nov. 4	Dec. 2	Nov. 4-Jan. 9	Jan. 10	No	Mar. 28

VARIETIES for above schedules

Standards

White

Ind. White*
Mefo* (after Dec. 31)
Queen's Lace
Jean Elizabeth

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Mefo* (after Dec. 31)
Yellow Lace

Pink

Dk. Orchid Queen*
Ind. Pink

Bronze

Mrs. Roy

Spray Types

White

Belray*
Shasta*
Encore
Ill. Igloo
White Valencia (1)
Crystal Valencia
Highbrow

Yellow

Lollipop*
Forty-niner*
(blind below 60°)
Pippin
Yellow Shasta*
Golden Chord
Yellow Valencia
Yellow Highbrow

Pink

Taffeta*
Linda Lou*
Dk. Valencia
Dubonnet Valencia
Orchid Valencia
Salmon Valencia

Bronze

Beauregard*
Thelma*
Rubicon
Apricot Valencia
Crimson Valencia

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Nov. 18	Dec. 16	Nov. 18-Jan. 23	Jan. 24	Mar. 15	Apr. 4
Nov. 25	Dec. 23	Nov. 25-Jan. 30	Jan. 31	Mar. 15	Apr. 11

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Ind. White
Queen's Lace

Yellow

Good News*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News
(not for June-Aug.)

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta*
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

Pink

Pandora*
Linda Lou*
Taffeta
Ballerina
Reward
Pink Dot

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin

(1) Note: Valencias are very nice if temperature is maintained at a 60° minimum, and if given ample light and space.

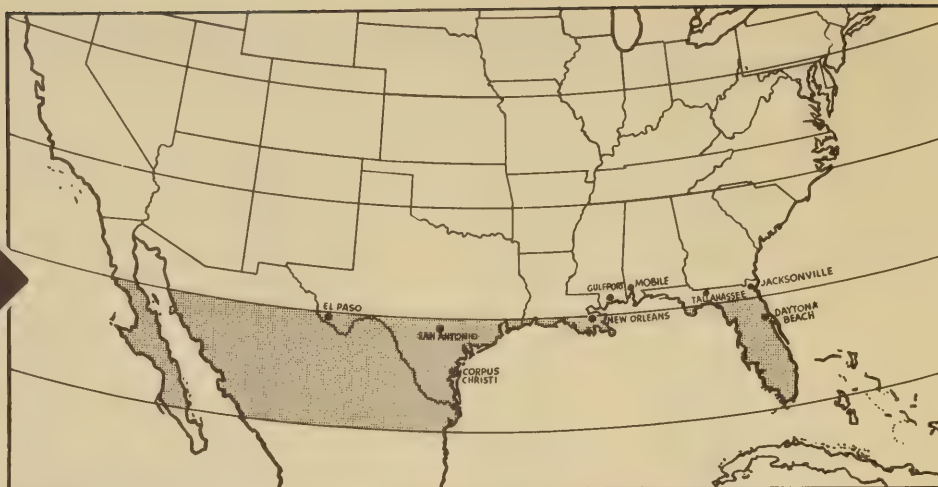
*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.

**FOR GROWERS
IN THIS AREA**

25-30° LATITUDE

**USE SCHEDULES
BELOW (Thru page 32).**



Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
1953	1954				
Dec. 24	Jan. 14	Dec. 24-Feb. 7	Feb. 8	Apr. 1	Apr. 19
Dec. 31	Jan. 21	Dec. 31-Feb. 14	Feb. 15	Apr. 1	Apr. 26
Jan. 7	Jan. 28	Jan. 7-Feb. 21	Feb. 22	Apr. 1	May 3
Jan. 14	Feb. 4	Jan. 14-Feb. 28	Mar. 1	Apr. 1	May 10
Jan. 21	Feb. 11	Jan. 21-Mar. 7	Mar. 8	Apr. 1	May 17
Jan. 28	Feb. 18	Jan. 28-Mar. 14	Mar. 15	Apr. 1	May 24
Feb. 4	Feb. 25	Feb. 4-Mar. 21	Mar. 22	Apr. 1	May 31
Feb. 11	Mar. 4	Feb. 11-Mar. 28	Mar. 29	Apr. 1	June 7
Feb. 25	Mar. 11	Feb. 25-Apr. 4	Apr. 5	Apr. 5	June 14
Mar. 4	Mar. 18	Mar. 4-Apr. 11	Apr. 12	Apr. 12	June 21
Mar. 11	Mar. 25	Mar. 11-Apr. 18	Apr. 19	Apr. 19	June 28
Mar. 18	Apr. 1	Mar. 18-Apr. 25	Apr. 26	Apr. 26	July 5
Mar. 25	Apr. 8	Mar. 25-May 2	May 3	May 3	July 12
Apr. 1	Apr. 15	Apr. 1-May 9	May 10	May 10	July 19
Apr. 8	Apr. 22	Apr. 8-May 16	May 17	May 17	July 26
Apr. 15	Apr. 29	Apr. 15-May 23	May 24	May 24	Aug. 2
Apr. 22	May 6	Apr. 22-May 30	May 31	May 31	Aug. 9
Apr. 29	May 13	Apr. 29-June 6	June 7	June 7	Aug. 16
May 6	May 20	May 6-June 13	June 14	June 14	Aug. 23
May 13	May 27	May 13-June 20	June 21	June 21	Aug. 30
May 20	June 3	May 20-June 27	June 28	June 28	Sept. 6
May 27	June 10	May 27-July 4	July 5	July 5	Sept. 13
June 3	June 17	June 3-July 11	July 12	July 12	Sept. 20
June 10	June 24	June 10-July 18	July 19	July 19	Sept. 27

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Ind. White
Queen's Lace

Yellow

Good News*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News
(not for
June-Aug.)

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta* (fades
June 1-Oct. 1)
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

extra
nice for
July-Aug.

Pink

Pandora*
Linda Lou*
Taffeta (to June 15)
Ballerina (to June 15)
Reward
Pink Dot
(extra nice for
July-Aug.)

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin
(extra nice for
July & Aug.)

*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 25-30°

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
June 17	July 1	June 17-July 25	July 26	July 26	Oct. 4
June 24	July 8	June 24-Aug. 1	Aug. 2	Aug. 2	Oct. 11
July 1	July 15	July 1-Aug. 8	Aug. 9	Aug. 9	Oct. 18
July 8	July 22	July 8-Aug. 15	Aug. 16	Aug. 16	Oct. 25
July 15	July 29	July 15-Aug. 22	Aug. 23	Aug. 23	Nov. 1
July 22	Aug. 5	July 22-Aug. 29	Aug. 30	Aug. 30	Nov. 8
July 29	Aug. 12	July 29-Sept. 5	Sept. 6	Sept. 6	Nov. 15
Aug. 5	Aug. 19	Aug. 5-Sept. 12	Sept. 13	Sept. 13	Nov. 22
Aug. 12	Aug. 26	Aug. 12-Sept. 19	Sept. 20	No	Nov. 29

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Ind. White
Queen's Lace

Yellow

Good News*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News
(not for
June-Aug.)

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta*
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

Pink

Pandora*
Linda Lou*
Taffeta
Ballerina
Reward
Pink Dot

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Aug. 12	Aug. 26	Aug. 12-Sept. 26	Sept. 27	No	Dec. 6
Aug. 19	Sept. 2	Aug. 19-Oct. 3	Oct. 4	No	Dec. 13
Aug. 26	Sept. 9	Aug. 26-Oct. 10	Oct. 11	No	Dec. 20
Sept. 2	Sept. 16	Sept. 2-Oct. 17	Oct. 18	No	Dec. 27
Sept. 9	Sept. 23	Sept. 9-Oct. 24	Oct. 25	No	Jan. 3
Sept. 16	Sept. 30	Sept. 16-Oct. 31	Nov. 1	No	Jan. 10

VARIETIES for above schedules

Standards

White

Ind. White*
Mefo* (after Dec. 31)
Queen's Lace*
Jean Elizabeth

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Mefo*
(after Dec. 31)
Yellow Lace

Pink

Dk. Orchid Queen*
Ind. Pink

Bronze

Mrs. Roy

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta*
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

Pink

Pandora*
Linda Lou*
Taffeta
Ballerina
Reward
Pink Dot

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin

*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.

FOR GROWERS IN LATITUDES 25-30°

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Sept. 23	Oct. 7	Sept. 23-Oct. 31	Nov. 1	No	Jan. 17
Sept. 30	Oct. 14	Sept. 30-Nov. 7	Nov. 8	No	Jan. 24
Oct. 7	Oct. 21	Oct. 7-Nov. 14	Nov. 15	No	Jan. 31
Oct. 14	Oct. 28	Oct. 14-Nov. 21	Nov. 22	No	Feb. 7
Oct. 21	Nov. 4	Oct. 21-Nov. 28	Nov. 29	No	Feb. 14
Oct. 28	Nov. 11	Oct. 28-Dec. 5	Dec. 6	No	Feb. 21
Nov. 4	Nov. 18	Nov. 4-Dec. 12	Dec. 13	No	Feb. 28
Nov. 11	Dec. 2	Nov. 11-Dec. 19	Dec. 20	No	Mar. 7
Nov. 18	Dec. 9	Nov. 18-Dec. 26	Dec. 27	No	Mar. 14
Nov. 25	Dec. 16	Nov. 25-Jan. 2	Jan. 3	No	Mar. 21
Dec. 2	Dec. 23	Dec. 2-Jan. 9	Jan. 10	No	Mar. 28

VARIETIES for above schedules

Standards

White

Ind. White*
Mefo*
Queen's Lace
Jean Elizabeth

Yellow

Imp. Ind. Yellow*
Ind. Yellow
Yellow Mefo*
Yellow Lace

Pink

Dk. Orchid Queen*
Ind. Pink

Bronze

Mrs. Roy

Spray Types

White

Belray*
Shasta*
Encore
Ill. Igloo
White Valencia (1)
Crystal Valencia
Highbrow

Yellow

Lollipop*
Forty-niner*
(blind below 60°)
Pippin
Yellow Shasta*
Golden Chord
Yellow Valencia
Yellow Highbrow

Pink

Taffeta*
Linda Lou*
Dk. Valencia
Dubonnett Valencia
Orchid Valencia
Salmon Valencia

Bronze

Beauregard*
Thelma*
Rubicon
Apricot Valencia
Crimson Valencia

Plant Date	Pinch Date**	Lighting Period	Lights Off	Start Shade	Flowering Date
Dec. 9	Dec. 30	Dec. 9-Jan. 23	Jan. 24	No	Apr. 4
Dec. 16	Jan. 6	Dec. 16-Jan. 30	Jan. 31	No	Apr. 11

VARIETIES for above schedules

Standards

White

Giant Betsy Ross*
Betsy Ross
Ind. White
Queen's Lace

Yellow

Good News*
Imp. Ind. Yellow
Ind. Yellow
Yellow Lace

Pink

Dk. Orchid Queen

Bronze

Mrs. Roy
Detroit News

Spray Types

White

Shasta*
Keepsake*
White Popcorn
Songster
Ill. Igloo
Pristine*

Yellow

Yellow Shasta*
Mary L. Hall*
Gold Coast*
Golden Herald
Crescendo
Sunup
Yellow Nagona
Yellow Halo

Pink

Pandora*
Linda Lou*
Taffeta
Ballerina
Reward
Pink Dot

Bronze

Beauregard*
Rubicon*
Paragon
Buckskin

(1) Note: Valencias are very nice if temperature is maintained at a 60° minimum, and if given ample light and space.

*Very best for the period.

**For single stemmed crops, plant cuttings on pinch date.

Pot Mums 'Round the Year

Even faster than cut mums, year 'round pot mums are rising toward a top spot among pot plants.

#1 reason: a six inch plant with 10-12 large, colorful blooms is produced in less than 3 months! Gross: \$1.50 to \$1.75 on about one sq. ft. Demand is good for them round the year, with the possible exception of January-February. They are moving well in all sections—even in California and Florida in recent months.

Properly scheduled, they're compact, easy to handle, and very long-lasting.

One pinch or two?

For the fellow who wants a uniformly good medium price (\$1.50-\$1.75) 6 inch pot mum round the year, we recommend single pinch clear thru. If you grow for the carriage trade, and can get more for a fancy plant, then the two pinch method is the way to do it. Possibly you will want some of each, especially toward fall. Schedules for both methods follow.

Two-pinch growing takes 3-4 weeks more time, some less cuttings.

Temperatures—65° does it

Definitely we recommend 65° nights (70° cloudy days, 75° clear days) for off-season pot growing. We've tried 60°; you just don't get the even bud set and flower development that you do at 65°.

After color shows, we drop them to 55°, or even less if we're holding them for a holiday.

Plants too tall?

The old cure: keep 'em dry and starved. The new one: delayed pinch.

With this new trick, another product of our floriculture schools, we are able to regulate the final height of the plant almost at will. The accompanying photos tell the story (see next page).

The year round pot mum schedules that follow take full advantage of this delayed pinch idea. If, for any reason, your pot mums flower too tall, chances are that delaying the final pinch for 5 to 7 days more next year will bring them down.

Two other pointers on too tall plants:

1. **Crowding plants** unduly makes them grow tall and chimney shaped instead of spreading. Well-grown 6 inch pot mums should need and get 1 1/2 sq. ft. in their final stages.

2. **Pinching:** with cut flowers, we get the strongest, most, and best breaks when we pinch only the top 1/2 inch or so out. Pot mum schedules are designed so that only 1 or 2 inches of new growth should normally occur prior to a pinch. However, due to delayed pinching, varying rates



Wilson's White, a European importation and tops in white pot Mums. It's very compact, large flowered, and dependable. Good 'round the year. We give it 3 to 5 extra long days in spring to keep it from being too short.

of growth, etc., plants may make up to 6-8 inches of new growth before the pinch. If only the tip of this is removed, a tall, leggy plant is coming your way. Only answer we find: cut them back to 1 or 2 inches of the new growth, even if it is harder wood. In any case, leave two pairs of leaves.

Remember: new breaks are encouraged by ample nitrates, water, and sunlight (space).

Many varieties if carefully grown can be kept so short they won't need staking. If they do, we set three stakes around outside of pot, run a string around them. Makes a sort of fence around the plant. Lots less work than tying individual stems.

Azalea pots, being somewhat shorter, are usually used for pot mums.

Watch those little fellows!

Last spring we grew a few 3 inch Garden varieties—one cutting, single pinch. In flower for Mother's Day and late May, they caught a lot of attention from local retailers. We got 50c for them.

Showy little fellows, they were well flowered, and they can be planted out in the customer's yard for more flowers in the fall.

Details, page 36.

About rapid growth

Needless to say, all we covered about humus, feeding, ample water, etc. under cut mums applies here—with interest! After all, we're growing a lot

(Continued on page 35)

DELAYED PINCH - WHY AND HOW

Delaying of final pinch is a simple means of growing shorter pot Mums—and with more flowers on them. The principle applies both to normal season and to year 'round production. While "delaying" is not necessary on all varieties at all seasons, every grower seriously interested in quality plants should understand it and use it where needed. Among other things, it will often eliminate need for tying.

Delayed pinching simply means making the final pinch a week—or two or three weeks—**after** short days are started (lights off or start shade date). Some pot Mums are given short days starting the day the cuttings are potted—no lights at all. We seem to get better quality plants by lighting them for a week or so after potting. Until the advent of delayed

pinching, it was customary (in most cases) to make the final pinch on the same date that short days were started.

The longer the final pinch is delayed, the shorter will be the final height of the plant—and the more flowers per plant. The Illini Snowdrift series pictured below shows clearly that if carried to the extreme, you can grow them **too** short!

The significant point: **we have definite control over height of pot Mums, so why grow them too tall?** Retailers in our area favor a plant 12 to 15 inches high (from pot rim).

We have "delayed" many of the schedules on our year 'round pot Mum schedules in this edition of the **BALL MUM GUIDE**. If your plants finish too tall grown to these schedules, simply delay the final pinch another week or ten days next year.



Here's what delayed pinch did for Masterpiece in pots. Center plant delayed one week. Plant on right delayed two weeks. Note especially the greater number of blooms per plant on the two weeks delay. The gradual shortening of plants with more delaying was equally apparent on this series—tho it doesn't show up in these photos. Plant on the left: not part of delayed pinch tests, but was included to show results of "pot, pinch, and shade" (no short day period) under our conditions. The week or so of lighting given the center and right plant does seem to pay off in a heavier, better quality plant.



Effect of delayed pinch on Illini Snowdrift. Plant on left was given final pinch one week after short days were started, center plant delayed three weeks, right plant delayed five weeks. For our demand, the one week delayed plant was best. Note that the plant delayed five weeks is a little later blooming. Actually this plant was shaded 10 days earlier than the other two in anticipation of this—and it still flowered later.



A fast wrap for pot Mums. It's a paper "cylinder" slightly cone-shaped. The cone is simply slid up over the plant from below. A wrap like this is fast to apply and will eliminate to some extent the need for tying. Bill Beyer holding the plant.

(Continued from page 33)

of plants in a handful of soil, and that takes some watching. Highlights:

1. **Humus:** one fourth either peat or manure (better yet, a mixture). We steam the soil—a year's supply at a time.
2. **Feeding:** Phosphate added dry as peat-manure is mixed. Nitrate and potash applied weekly (in summer) as a liquid feed. Use same rates with 25-0-25 as for cut mums. Some excellent pot mum specialists feed every 3 days!
3. **Water**—be sure there's good drainage, then keep them well watered, especially as they get larger. That may mean every day in hot weather. If pots are set on muddy soil, it stops up drain holes.

In potting don't fill the pot clear full. Leaving an inch will catch more water—reduce frequency of watering.

Disbudding

In most sections, competition demands that the 10 or 12 stems on a pot mum be disbudded to one flower per stem; also side shoots are removed down the stem. Exception: the garden varieties, or any poms grown as a pot mum. They just won't make a bigger flower, even when disbudded.

TROUBLES—A FEW OF THE MOST COMMON

1. Uneven bud set?

The same problem as with cut mums (page 9). For winter-spring crops, we find 65° nights gives much more even bud set and development than 60°. Good quality, too.

2. Lower leaves dry up—why?

Several reasons. One very common one is foliar nematode or foliage diseases. See page 7.

Generally they are worse on outdoor grown plants.

Two other reasons: overcrowding and under-feeding. Under good care, the leaves should stay on, and stay green clear to the bottom. Poor drainage seems to affect them, too.

3. Can't get over 1 or 2 breaks per cutting

As with any plant, the three main requirements for generous and prompt breaking are plenty of nitrate and potash, plenty of water, and ample sunlight (meaning generous spacing).

Varieties differ—Bonaffon is good, Blazing Gold only fair. We put one more cutting per pot of poor breakers.

A good, soft cutting will always break better than a hard, wiry one.

4. Flowers rot as they open

Much the same story as with cut Mums—page 7. Several pot mum growers report good control with Parzate dust—every 3 days. Some shade on glass in hot weather helps.

ABOUT SINGLE STEM POT MUMS

We don't recommend to any grower that he go over 100% to single stem pot mums. But there are some angles to them that may fit your trade. The pros and cons as we see them:

Let's put down the disadvantages first. Mainly it's more cuttings—probably seven to a 6" pot against five for the same plant pinched. Net loss: two cuttings.

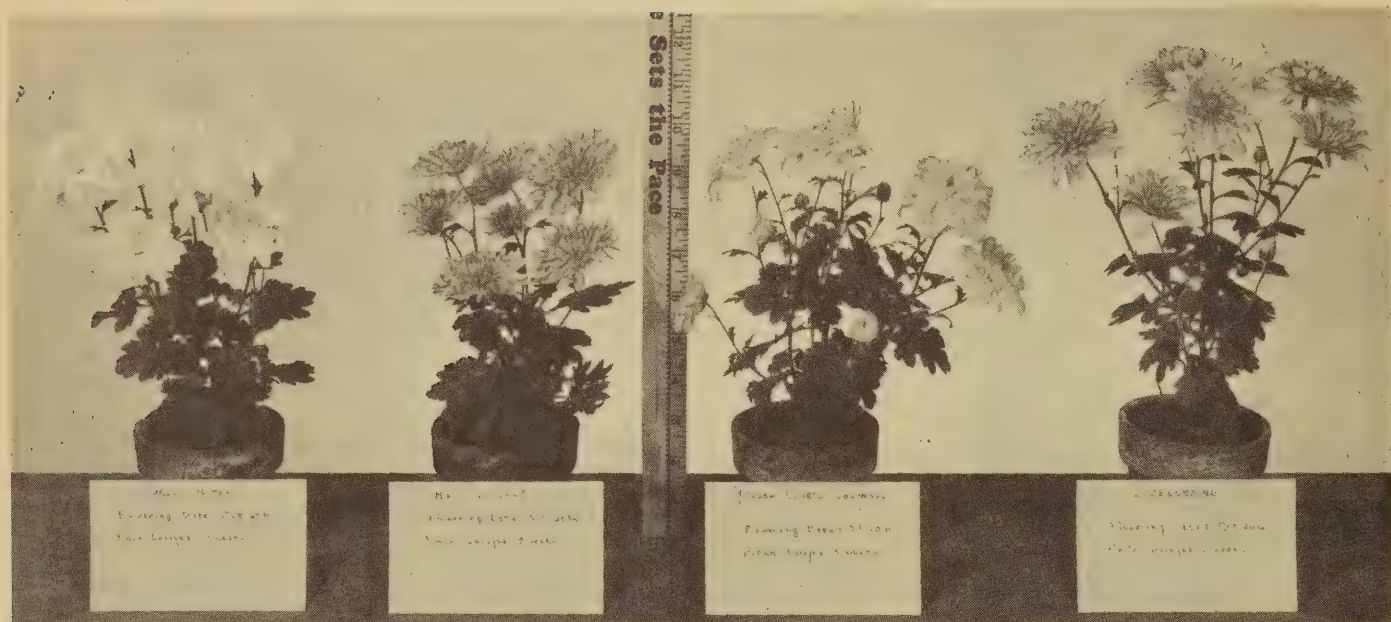
On the credit side:

1. Large, showy blooms—Indianapolis White, for example, makes fine large, showy blooms that would average $\frac{1}{3}$ to $\frac{1}{2}$ larger than the same variety pinched. They're really quite striking. It's a deluxe plant, but still finished in a six. Individual flowers ran 5½ to 6 inches in our trials. If competition in pot mums is hot on your heels, perhaps this is a way to "have the best".
2. Ordinarily, no pinch plants do not require tying. They are almost always short, and having more plants per pot than pinched plants, tend to stand up better.
3. No more problem of getting enough breaks per plant. Indianapolis is bad on this, but nice grown "no pinch".
4. You save several weeks time on the bench—and the labor of pinching and tying, too, of course.

Here's How:

Plant 5-7 cuttings per 6" pot; give 4 long days then shade (or lights off). Do not pinch. Salable pot plant in 9½-10 weeks. Dark Indianapolis Yellow and Indianapolis White are best for this treatment!

Use only varieties that are normally quite short growers.



Would these 3 inch Hardies sell in your area in May? Of course, without color you can't really appreciate them. They are mighty showy! Not much work or space involved in growing them either. We figured we'd come out on them at 50c wholesale. Local retail shops showed much interest in the few we grew last spring. No doubt a good part of their appeal lies in the second crop that can be realized from them in the fall. Note 3 weeks delay in pinch on all varieties.

HARDIES AS POT PLANTS

The large flowered greenhouse varieties are definitely the backbone of the pot mum trade. However, use of Garden or Hardy types, especially flowered in late spring, offers welcome variety.

Advantages:

1. Big sales appeal is that after flowers fade, plants may be set out in the garden for a #2 crop in the fall. They'll do real well, too—we've tried it! The 4 or 5 cuttings in a pot may be torn apart and planted out separately.

Important point: an attractively printed tag should hang on each plant telling the above story to the buyer. The store clerk may not!

2. What the Hardies lack in flower size, they make up in attractive and unusual colors. They are lovely!

3. Though not appropriate to their use as a spring pot plant, it should be added that for August-September flowering, they will stand heat much better than greenhouse types without delay in bud development.

4. No disbudding cost. By the way, it just doesn't pay to disbud them—flowers won't be much larger than in spray.

Schedules . . .

for Easter, Mother's Day, and Memorial Day 1954 follow:

HARDY POT PLANT SCHEDULE

Use these varieties*: Chris Columbus, Yellow Chris Columbus, Spellbound, Mrs. DuPont.

4 Cuttings per 5 inch pot, or 1 Cutting per 3 inch pot

To Flower For	Plant	Lighting Period	Shade	Pinch**
Easter	Feb. 4	Feb. 4-Feb. 10	March 15	Feb. 25
Mother's Day	Feb. 25	Feb. 25-March 3	March 15	March 18
Decoration Day	March 18	March 18-March 24	March 24	April 8

*Do not disbud!

**Pinch delayed.

Pot Plant Schedules

SINGLE PINCH

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Royal Bronze*	Nov. 19	Dec. 10**	Nov. 19-Nov. 25	No	Jan. 31
Gypsy	Nov. 19	Nov. 26	Nov. 19-Nov. 25	No	Feb. 4
Queen of Pinks	Nov. 19	Nov. 26	Nov. 19-Nov. 25	No	Feb. 4
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Nov. 19	Dec. 10**	Nov. 19-Nov. 25	No	Feb. 4
Bronze Masterpiece	Nov. 19	Dec. 10**	Nov. 19-Nov. 25	No	Feb. 7
Copperhead	Nov. 19	Dec. 10**	Nov. 19-Nov. 25	No	Feb. 7
Little America	Nov. 19	Dec. 3**	Nov. 19-Nov. 25	No	Feb. 7
Bonnaffon DeLuxe	Nov. 19	Nov. 26	Nov. 19-Nov. 25	No	Feb. 11
Granite State	Nov. 19	Nov. 29	Nov. 19-Nov. 28	No	Jan. 31
Wilson White*	Nov. 19	Nov. 29	Nov. 19-Nov. 28	No	Feb. 7
Royal Bronze*	Nov. 26	Dec. 17**	Nov. 26-Dec. 2	No	Feb. 7
Gypsy	Nov. 26	Dec. 3	Nov. 26-Dec. 2	No	Feb. 11
Queen of Pinks	Nov. 26	Dec. 3	Nov. 26-Dec. 2	No	Feb. 11
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Nov. 26	Dec. 17**	Nov. 26-Dec. 2	No	Feb. 11
Bronze Masterpiece	Nov. 26	Dec. 17**	Nov. 26-Dec. 2	No	Feb. 14
Copperhead	Nov. 26	Dec. 17**	Nov. 26-Dec. 2	No	Feb. 14
Little America	Nov. 26	Dec. 10**	Nov. 26-Dec. 2	No	Feb. 14
Bonnaffon DeLuxe	Nov. 26	Dec. 3	Nov. 26-Dec. 2	No	Feb. 18
Granite State	Nov. 26	Dec. 6	Nov. 26-Dec. 5	No	Feb. 7
Wilson's White*	Nov. 26	Dec. 6	Nov. 26-Dec. 5	No	Feb. 14
Royal Bronze*	Dec. 3	Dec. 24**	Dec. 3-Dec. 9	No	Feb. 14
Gypsy	Dec. 3	Dec. 10	Dec. 3-Dec. 9	No	Feb. 18
Queen of Pinks	Dec. 3	Dec. 10	Dec. 3-Dec. 9	No	Feb. 18
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Dec. 3	Dec. 24**	Dec. 3-Dec. 9	No	Feb. 18
Bronze Masterpiece	Dec. 3	Dec. 24**	Dec. 3-Dec. 9	No	Feb. 21
Copperhead	Dec. 3	Dec. 24**	Dec. 3-Dec. 9	No	Feb. 21
Little America	Dec. 3	Dec. 17**	Dec. 3-Dec. 9	No	Feb. 21
Bonnaffon DeLuxe	Dec. 3	Dec. 10	Dec. 3-Dec. 9	No	Feb. 25
Granite State	Dec. 3	Dec. 13	Dec. 3-Dec. 12	No	Feb. 14
Wilson's White*	Dec. 3	Dec. 13	Dec. 3-Dec. 12	No	Feb. 21
Royal Bronze*	Dec. 10	Dec. 31**	Dec. 10-Dec. 16	No	Feb. 21
Gypsy	Dec. 10	Dec. 17	Dec. 10-Dec. 16	No	Feb. 25
Queen of Pinks	Dec. 10	Dec. 17	Dec. 10-Dec. 16	No	Feb. 25
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Dec. 10	Dec. 31**	Dec. 10-Dec. 16	No	Feb. 25
Bronze Masterpiece	Dec. 10	Dec. 31**	Dec. 10-Dec. 16	No	Feb. 28
Copperhead	Dec. 10	Dec. 31**	Dec. 10-Dec. 16	No	Feb. 28
Little America	Dec. 10	Dec. 24**	Dec. 10-Dec. 16	No	Feb. 28
Bonnaffon DeLuxe	Dec. 10	Dec. 17	Dec. 10-Dec. 16	No	Mar. 4
Granite State	Dec. 10	Dec. 20	Dec. 10-Dec. 19	No	Feb. 21
Wilson's White*	Dec. 10	Dec. 20	Dec. 10-Dec. 19	No	Feb. 28
Royal Bronze*	Dec. 17	Jan. 7**	Dec. 17-Dec. 23	No	Feb. 28
Gypsy	Dec. 17	Dec. 24	Dec. 17-Dec. 23	No	Mar. 4
Queen of Pinks	Dec. 17	Dec. 24	Dec. 17-Dec. 23	No	Mar. 4
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Dec. 17	Jan. 7**	Dec. 17-Dec. 23	No	Mar. 4
Bronze Masterpiece	Dec. 17	Jan. 7**	Dec. 17-Dec. 23	No	Mar. 7
Copperhead	Dec. 17	Jan. 7**	Dec. 17-Dec. 23	No	Mar. 7
Little America	Dec. 17	Dec. 31**	Dec. 17-Dec. 23	No	Mar. 7
Bonnaffon DeLuxe	Dec. 17	Dec. 24	Dec. 17-Dec. 23	No	Mar. 11
Granite State	Dec. 17	Dec. 27	Dec. 17-Dec. 26	No	Feb. 28
Wilson's White*	Dec. 17	Dec. 27	Dec. 17-Dec. 26	No	Mar. 7

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.
2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Royal Bronze*	Dec. 24	Jan. 14**	Dec. 24-Dec. 30	No	Mar. 7
Gypsy	Dec. 24	Dec. 31	Dec. 24-Dec. 30	No	Mar. 11
Queen of Pinks	Dec. 24	Dec. 31	Dec. 24-Dec. 30	No	Mar. 11
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace	Dec. 24	Jan. 14**	Dec. 24-Dec. 30	No	Mar. 11
Bronze Masterpiece	Dec. 24	Jan. 14**	Dec. 24-Dec. 30	No	Mar. 14
Copperhead	Dec. 24	Jan. 14**	Dec. 24-Dec. 30	No	Mar. 14
Little America	Dec. 24	Jan. 7**	Dec. 24-Dec. 30	No	Mar. 14
Bonnaffon DeLuxe	Dec. 24	Dec. 31	Dec. 24-Dec. 30	No	Mar. 18
Granite State	Dec. 24	Jan. 3	Dec. 24-Jan. 2	No	Mar. 7
Wilson's White*	Dec. 24	Jan. 3	Dec. 24-Jan. 2	No	Mar. 14
Royal Bronze*	Dec. 31	Jan. 21**	Dec. 31-Jan. 6	No	Mar. 14
Gypsy	Dec. 31	Jan. 7	Dec. 31-Jan. 6	No	Mar. 18
Queen of Pinks	Dec. 31	Jan. 7	Dec. 31-Jan. 6	No	Mar. 18
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace	Dec. 31	Jan. 21**	Dec. 31-Jan. 6	No	Mar. 18
Bronze Masterpiece	Dec. 31	Jan. 21**	Dec. 31-Jan. 6	No	Mar. 21
Copperhead	Dec. 31	Jan. 21**	Dec. 31-Jan. 6	No	Mar. 21
Little America	Dec. 31	Jan. 14**	Dec. 31-Jan. 6	No	Mar. 21
Bonnaffon DeLuxe	Dec. 31	Jan. 7	Dec. 31-Jan. 6	No	Mar. 25
Granite State	Dec. 31	Jan. 10	Dec. 31-Jan. 9	No	Mar. 14
Wilson's White*	Dec. 31	Jan. 10	Dec. 31-Jan. 9	No	Mar. 21
Blazing Gold*	Jan. 7	Jan. 14	Jan. 7-Jan. 13	No	Mar. 11
Queen of Pinks	Jan. 7	Jan. 14	Jan. 7-Jan. 13	No	Mar. 25
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace	Jan. 7	Jan. 28**	Jan. 7-Jan. 13	No	Mar. 25
Ind. varieties*: White, } Yellow, Dk. Yellow, Pink	Jan. 7	Jan. 28**	Jan. 7-Jan. 13	Mar. 15	Mar. 28
Ill. Snowdrift	Jan. 7	Jan. 28**	Jan. 7-Jan. 13	Mar. 15	Mar. 28
Masterpiece	Jan. 7	Jan. 28**	Jan. 7-Jan. 13	Mar. 15	Mar. 28
Little America	Jan. 7	Jan. 21**	Jan. 7-Jan. 13	Mar. 15	Mar. 28
Bonnaffon DeLuxe	Jan. 7	Jan. 14	Jan. 7-Jan. 13	Mar. 15	Apr. 1
Granite State	Jan. 7	Jan. 17	Jan. 7-Jan. 16	No	Mar. 21
Wilson's White*	Jan. 7	Jan. 17	Jan. 7-Jan. 16	Mar. 15	Mar. 28
Blazing Gold*	Jan. 14	Jan. 21	Jan. 14-Jan. 20	No	Mar. 18
Queen of Pinks	Jan. 14	Jan. 21	Jan. 14-Jan. 20	Mar. 15	Apr. 1
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace	Jan. 14	Feb. 4**	Jan. 14-Jan. 20	Mar. 15	Apr. 1
Ind. varieties*: White, } Yellow, Dk. Yellow, Pink	Jan. 14	Feb. 4**	Jan. 14-Jan. 20	Mar. 15	Apr. 4
Ill. Snowdrift	Jan. 14	Feb. 4**	Jan. 14-Jan. 20	Mar. 15	Apr. 4
Masterpiece	Jan. 14	Feb. 4**	Jan. 14-Jan. 20	Mar. 15	Apr. 4
Little America	Jan. 14	Jan. 28**	Jan. 14-Jan. 20	Mar. 15	Apr. 4
Bonnaffon DeLuxe	Jan. 14	Jan. 21	Jan. 14-Jan. 20	Mar. 15	Apr. 8
Granite State	Jan. 14	Jan. 24	Jan. 14-Jan. 23	Mar. 15	Mar. 28
Wilson's White*	Jan. 14	Jan. 24	Jan. 14-Jan. 23	Mar. 15	Apr. 4
Blazing Gold*	Jan. 21	Jan. 28	Jan. 21-Jan. 27	Mar. 15	Mar. 25
Queen of Pinks	Jan. 21	Jan. 28	Jan. 21-Jan. 27	Mar. 15	Apr. 8
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace	Jan. 21	Feb. 11**	Jan. 21-Jan. 27	Mar. 15	Apr. 8
Ind. varieties*: White, } Yellow, Dk. Yellow, Pink	Jan. 21	Feb. 11**	Jan. 21-Jan. 27	Mar. 15	Apr. 11
Ill. Snowdrift	Jan. 21	Feb. 11**	Jan. 21-Jan. 27	Mar. 15	Apr. 11
Masterpiece	Jan. 21	Feb. 11**	Jan. 21-Jan. 27	Mar. 15	Apr. 11
Little America	Jan. 21	Feb. 4**	Jan. 21-Jan. 27	Mar. 15	Apr. 11
Bonnaffon DeLuxe	Jan. 21	Jan. 28	Jan. 21-Jan. 27	Mar. 15	Apr. 15
Granite State	Jan. 21	Jan. 31	Jan. 21-Jan. 30	Mar. 15	Apr. 4
Wilson's White*	Jan. 21	Jan. 31	Jan. 21-Jan. 30	Mar. 15	Apr. 11

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.

2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Blazing Gold*	Jan. 28	Feb. 4	Jan. 28-Feb. 3	Mar. 15	Apr. 1
Queen of Pinks	Jan. 28	Feb. 4	Jan. 28-Feb. 3	Mar. 15	Apr. 15
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Jan. 28	Feb. 18**	Jan. 28-Feb. 3	Mar. 15	Apr. 15
Ind. varieties*: White, Yellow, Dk. Yellow, Pink	Jan. 28	Feb. 18**	Jan. 28-Feb. 3	Mar. 15	Apr. 18
Ill. Snowdrift	Jan. 28	Feb. 18**	Jan. 28-Feb. 3	Mar. 15	Apr. 18
Masterpiece	Jan. 28	Feb. 18**	Jan. 28-Feb. 3	Mar. 15	Apr. 18
Bonnaffon DeLuxe	Jan. 28	Feb. 4	Jan. 28-Feb. 3	Mar. 15	Apr. 22
Granite State	Jan. 28	Feb. 7	Jan. 28-Feb. 6	Mar. 15	Apr. 11
Wilson's White*	Jan. 28	Feb. 7	Jan. 28-Feb. 6	Mar. 15	Apr. 18
Blazing Gold*	Feb. 4	Feb. 11	Feb. 4-Feb. 10	Mar. 15	Apr. 8
Queen of Pinks	Feb. 4	Feb. 11	Feb. 4-Feb. 10	Mar. 15	Apr. 22
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Feb. 4	Feb. 25**	Feb. 4-Feb. 10	Mar. 15	Apr. 22
Ind. varieties*: White, Yellow, Dk. Yellow, Pink	Feb. 4	Feb. 25**	Feb. 4-Feb. 10	Mar. 15	Apr. 25
Ill. Snowdrift	Feb. 4	Feb. 25**	Feb. 4-Feb. 10	Mar. 15	Apr. 25
Masterpiece	Feb. 4	Feb. 25**	Feb. 4-Feb. 10	Mar. 15	Apr. 25
Bonnaffon DeLuxe	Feb. 4	Feb. 11	Feb. 4-Feb. 10	Mar. 15	Apr. 29
Granite State	Feb. 4	Feb. 14	Feb. 4-Feb. 13	Mar. 15	Apr. 18
Wilson's White*	Feb. 4	Feb. 14	Feb. 4-Feb. 13	Mar. 15	Apr. 25
Blazing Gold*	Feb. 11	Feb. 18	Feb. 11-Feb. 17	Mar. 15	Apr. 15
Queen of Pinks	Feb. 11	Feb. 18	Feb. 11-Feb. 17	Mar. 15	Apr. 29
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Feb. 11	Mar. 4**	Feb. 11-Feb. 17	Mar. 15	Apr. 29
Ind. varieties*: White, Yellow, Dk. Yellow, Pink	Feb. 11	Mar. 4**	Feb. 11-Feb. 17	Mar. 15	May 2
Ill. Snowdrift	Feb. 11	Mar. 4**	Feb. 11-Feb. 17	Mar. 15	May 2
Masterpiece	Feb. 11	Mar. 4**	Feb. 11-Feb. 17	Mar. 15	May 2
Bonnaffon DeLuxe	Feb. 11	Feb. 18	Feb. 11-Feb. 17	Mar. 15	May 6
Granite State	Feb. 11	Feb. 21	Feb. 11-Feb. 20	Mar. 15	Apr. 25
Wilson's White*	Feb. 11	Feb. 21	Feb. 11-Feb. 20	Mar. 15	May 2
Blazing Gold*	Feb. 18	Feb. 25	Feb. 18-Feb. 24	Mar. 15	Apr. 22
Queen of Pinks	Feb. 18	Feb. 25	Feb. 18-Feb. 24	Mar. 15	May 6
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Feb. 18	Mar. 11**	Feb. 18-Feb. 24	Mar. 15	May 6
Ind. varieties*: White, Yellow, Dk. Yellow, Pink	Feb. 18	Mar. 11**	Feb. 18-Feb. 24	Mar. 15	May 9
Ill. Snowdrift	Feb. 18	Mar. 11**	Feb. 18-Feb. 24	Mar. 15	May 9
Masterpiece	Feb. 18	Mar. 11**	Feb. 18-Feb. 24	Mar. 15	May 9
Bonnaffon DeLuxe	Feb. 18	Feb. 25	Feb. 18-Feb. 24	Mar. 15	May 13
Granite State	Feb. 18	Feb. 28	Feb. 18-Feb. 27	Mar. 15	May 2
Wilson's White*	Feb. 18	Feb. 28	Feb. 18-Feb. 27	Mar. 15	May 9
Blazing Gold*	Feb. 25	Mar. 4	Feb. 25-Mar. 3	Mar. 15	Apr. 29
Queen of Pinks	Feb. 25	Mar. 4	Feb. 25-Mar. 3	Mar. 15	May 13
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Feb. 25	Mar. 18**	Feb. 25-Mar. 3	Mar. 15	May 13
Ind. varieties*: White, Yellow, Dk. Yellow	Feb. 25	Mar. 18**	Feb. 25-Mar. 3	Mar. 15	May 16
Ill. Snowdrift	Feb. 25	Mar. 18**	Feb. 25-Mar. 3	Mar. 15	May 16
Masterpiece	Feb. 25	Mar. 18**	Feb. 25-Mar. 3	Mar. 15	May 16
Bonnaffon DeLuxe	Feb. 25	Mar. 4	Feb. 25-Mar. 3	Mar. 15	May 20
Granite State	Feb. 25	Mar. 7	Feb. 25-Mar. 6	Mar. 15	May 9
Wilson's White*	Feb. 25	Mar. 7	Feb. 25-Mar. 6	Mar. 15	May 16

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.
2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Blazing Gold*	Mar. 4	Mar. 11	Mar. 4-Mar. 10	Mar. 15	May 6
Queen of Pinks	Mar. 4	Mar. 11	Mar. 4-Mar. 10	Mar. 15	May 20
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Mar. 4	Mar. 25**	Mar. 4-Mar. 10	Mar. 15	May 20
Ind. varieties*: White, Yellow, Dk. Yellow	Mar. 4	Mar. 25**	Mar. 4-Mar. 10	Mar. 15	May 23
Ill. Snowdrift	Mar. 4	Mar. 25**	Mar. 4-Mar. 10	Mar. 15	May 23
Masterpiece	Mar. 4	Mar. 25**	Mar. 4-Mar. 10	Mar. 15	May 23
Bonnaffon DeLuxe	Mar. 4	Mar. 11	Mar. 4-Mar. 10	Mar. 15	May 27
Granite State	Mar. 4	Mar. 14	Mar. 4-Mar. 13	Mar. 15	May 16
Wilson's White*	Mar. 4	Mar. 14	Mar. 4-Mar. 13	Mar. 15	May 23
Blazing Gold*	Mar. 11	Mar. 18	Mar. 11-Mar. 17	Mar. 18	May 13
Queen of Pinks	Mar. 11	Mar. 18	Mar. 11-Mar. 17	Mar. 18	May 27
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Mar. 11	Apr. 1**	Mar. 11-Mar. 17	Mar. 18	May 27
Ind. varieties*: White, Yellow, Dk. Yellow	Mar. 11	Apr. 1**	Mar. 11-Mar. 17	Mar. 18	May 30
Ill. Snowdrift	Mar. 11	Apr. 1**	Mar. 11-Mar. 17	Mar. 18	May 30
Masterpiece	Mar. 11	Apr. 1**	Mar. 11-Mar. 17	Mar. 18	May 30
Bonnaffon DeLuxe	Mar. 11	Mar. 18	Mar. 11-Mar. 17	Mar. 18	June 3
Granite State	Mar. 11	Mar. 21	Mar. 11-Mar. 20	Mar. 21	May 23
Wilson's White*	Mar. 11	Mar. 21	Mar. 11-Mar. 20	Mar. 21	May 30
Blazing Gold*	Mar. 18	Mar. 25	Mar. 18-Mar. 24	Mar. 25	May 20
Queen of Pinks	Mar. 18	Mar. 25	Mar. 18-Mar. 24	Mar. 25	June 3
Richard Mandel	Mar. 18	Mar. 25	Mar. 18-Mar. 24	Mar. 25	June 3
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Mar. 18	Apr. 8**	Mar. 18-Mar. 24	Mar. 25	June 3
Ind. varieties*: White, Yellow, Dk. Yellow	Mar. 18	Apr. 8**	Mar. 18-Mar. 24	Mar. 25	June 6
Ill. Snowdrift	Mar. 18	Apr. 8**	Mar. 18-Mar. 24	Mar. 25	June 6
Bonnaffon DeLuxe	Mar. 18	Mar. 25	Mar. 18-Mar. 24	Mar. 25	June 10
Granite State	Mar. 18	Mar. 28	Mar. 18-Mar. 27	Mar. 28	May 30
Wilson's White*	Mar. 18	Mar. 28	Mar. 18-Mar. 27	Mar. 28	June 6
Blazing Gold*	Mar. 25	Apr. 1	Mar. 25-Mar. 31	Apr. 1	May 27
Queen of Pinks	Mar. 25	Apr. 1	Mar. 25-Mar. 31	Apr. 1	June 10
Richard Mandel	Mar. 25	Apr. 1	Mar. 25-Mar. 31	Apr. 1	June 10
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Mar. 25	Apr. 15**	Mar. 25-Mar. 31	Apr. 1	June 10
Ind. varieties*: White, Yellow, Dk. Yellow	Mar. 25	Apr. 15**	Mar. 25-Mar. 31	Apr. 1	June 13
Ill. Snowdrift	Mar. 25	Apr. 15**	Mar. 25-Mar. 31	Apr. 1	June 13
Bonnaffon DeLuxe	Mar. 25	Apr. 1	Mar. 25-Mar. 31	Apr. 1	June 17
Granite State	Mar. 25	Apr. 4	Mar. 25-Apr. 3	Apr. 4	June 6
Wilson's White*	Mar. 25	Apr. 4	Mar. 25-Apr. 3	Apr. 4	June 13
Blazing Gold*	Apr. 1	Apr. 8	Apr. 1-Apr. 7	Apr. 8	June 3
Richard Mandel	Apr. 1	Apr. 8	Apr. 1-Apr. 7	Apr. 8	June 17
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Apr. 1	Apr. 22**	Apr. 1-Apr. 7	Apr. 8	June 17
Ill. Snowdrift	Apr. 1	Apr. 22**	Apr. 1-Apr. 7	Apr. 8	June 20
Bonnaffon DeLuxe	Apr. 1	Apr. 8	Apr. 1-Apr. 7	Apr. 8	June 24
Granite State	Apr. 1	Apr. 11	Apr. 1-Apr. 10	Apr. 11	June 13
Wilson's White*	Apr. 1	Apr. 11	Apr. 1-Apr. 10	Apr. 11	June 20
Blazing Gold*	Apr. 8	Apr. 15	Apr. 8-Apr. 14	Apr. 15	June 10
Richard Mandel	Apr. 8	Apr. 15	Apr. 8-Apr. 14	Apr. 15	June 24
Lace varieties: Yellow, Gold, Hooked, and Queen's Lace	Apr. 8	Apr. 29**	Apr. 8-Apr. 14	Apr. 15	June 24
Ill. Snowdrift	Apr. 8	Apr. 29**	Apr. 8-Apr. 14	Apr. 15	June 27
Bonnaffon DeLuxe	Apr. 8	Apr. 15	Apr. 8-Apr. 14	Apr. 15	July 1
Granite State	Apr. 8	Apr. 18	Apr. 8-Apr. 17	Apr. 18	June 20
Wilson's White*	Apr. 8	Apr. 18	Apr. 8-Apr. 17	Apr. 18	June 27
Blazing Gold*	Apr. 15	Apr. 22	Apr. 15-Apr. 21	Apr. 22	June 17
Richard Mandel	Apr. 15	Apr. 22	Apr. 15-Apr. 21	Apr. 22	July 1
Bonnaffon DeLuxe	Apr. 15	Apr. 22	Apr. 15-Apr. 21	Apr. 22	July 8
Granite State	Apr. 15	Apr. 25	Apr. 15-Apr. 24	Apr. 25	June 27
Wilson's White*	Apr. 15	Apr. 25	Apr. 15-Apr. 24	Apr. 25	July 4

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.
2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Blazing Gold*	Apr. 22	Apr. 29	Apr. 22-Apr. 28	Apr. 29	June 24
Richard Mandel	Apr. 22	Apr. 29	Apr. 22-Apr. 28	Apr. 29	July 8
Bonnaffon DeLuxe	Apr. 22	Apr. 29	Apr. 22-Apr. 28	Apr. 29	July 15
Granite State	Apr. 22	May 2	Apr. 22-Apr. 30	May 2	July 4
Wilson's White*	Apr. 22	May 2	Apr. 22-Apr. 30	May 2	July 11
Blazing Gold*	Apr. 29	May 6	Apr. 29-Apr. 30	May 6	July 1
Richard Mandel	Apr. 29	May 6	Apr. 29-Apr. 30	May 6	July 15
Bonnaffon DeLuxe	Apr. 29	May 6	Apr. 29-Apr. 30	May 6	July 22
Granite State	Apr. 29	May 9	Apr. 29-Apr. 30	May 9	July 11
Wilson's White*	Apr. 29	May 9	Apr. 29-Apr. 30	May 9	July 18
Blazing Gold*	May 6	May 13	No	May 13	July 8
Richard Mandel	May 6	May 13	No	May 13	July 22
Bonnaffon DeLuxe	May 6	May 13	No	May 13	July 29
Granite State	May 6	May 16	No	May 16	July 11
Wilson's White*	May 6	May 16	No	May 16	July 18
Blazing Gold*	May 13	May 20	No	May 20	July 15
Richard Mandel	May 13	May 20	No	May 20	July 29
Bonnaffon DeLuxe	May 13	May 20	No	May 20	Aug. 5
Granite State	May 13	May 23	No	May 23	July 18
Wilson's White*	May 13	May 23	No	May 23	July 25
Blazing Gold*	May 20	May 27	No	May 27	July 22
Richard Mandel	May 20	May 27	No	May 27	Aug. 5
Bonnaffon DeLuxe	May 20	May 27	No	May 27	Aug. 12
Granite State	May 20	May 30	No	May 30	July 25
Wilson's White*	May 20	May 30	No	May 30	Aug. 1
Blazing Gold*	May 27	June 3	No	June 3	July 29
Richard Mandel	May 27	June 3	No	June 3	Aug. 12
Bonnaffon DeLuxe	May 27	June 3	No	June 3	Aug. 19
Granite State	May 27	June 6	No	June 6	Aug. 1
Wilson's White*	May 27	June 6	No	June 6	Aug. 8
Blazing Gold*	June 3	June 10	No	June 10	Aug. 5
Richard Mandel	June 3	June 10	No	June 10	Aug. 19
Bonnaffon DeLuxe	June 3	June 10	No	June 10	Aug. 26
Granite State	June 3	June 13	No	June 13	Aug. 8
Wilson's White*	June 3	June 13	No	June 13	Aug. 15
Blazing Gold*	June 10	June 17	No	June 17	Aug. 12
Richard Mandel	June 10	June 17	No	June 17	Aug. 26
Bonnaffon DeLuxe	June 10	June 17	No	June 17	Sept. 2
Granite State	June 10	June 20	No	June 20	Aug. 15
Wilson's White*	June 10	June 20	No	June 20	Aug. 22
Blazing Gold*	June 17	June 24	No	June 24	Aug. 19
Granite State	June 17	June 24	No	June 24	Aug. 26
Richard Mandel	June 17	June 24	No	June 24	Sept. 2
Queen of Pinks	June 17	June 24	No	June 24	Sept. 2
Wilson's White*	June 17	June 24	No	June 24	Sept. 2
Bonnaffon DeLuxe	June 17	June 24	No	June 24	Sept. 9
Blazing Gold*	June 24	July 1	No	July 1	Aug. 26
Granite State	June 24	July 1	No	July 1	Sept. 2
Richard Mandel	June 24	July 1	No	July 1	Sept. 9
Queen of Pinks	June 24	July 1	No	July 1	Sept. 9
Wilson's White*	June 24	July 1	No	July 1	Sept. 9
Little America	June 24	July 15**	No	July 1	Sept. 12
Bonnaffon DeLuxe	June 24	July 1	No	July 1	Sept. 16
Blazing Gold*	July 1	July 8	No	July 8	Sept. 2
Granite State	July 1	July 8	No	July 8	Sept. 9
Richard Mandel	July 1	July 8	No	July 8	Sept. 16
Queen of Pinks	July 1	July 8	No	July 8	Sept. 16
Wilson's White*	July 1	July 8	No	July 8	Sept. 16
Little America	July 1	July 22**	No	July 8	Sept. 19
Bonnaffon DeLuxe	July 1	July 8	No	July 8	Sept. 23

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.
2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Blazing Gold*	July 8	July 15	No	July 15	Sept. 9
Granite State	July 8	July 15	No	July 15	Sept. 16
Richard Mandel	July 8	July 15	No	July 15	Sept. 23
Queen of Pinks	July 8	July 15	No	July 15	Sept. 23
Wilson's White*	July 8	July 15	No	July 15	Sept. 23
Little America	July 8	July 29**	No	July 15	Sept. 26
Bonnaffon DeLuxe	July 8	July 15	No	July 15	Sept. 30
Blazing Gold*	July 15	July 22	No	July 22	Sept. 16
Granite State	July 15	July 22	No	July 22	Sept. 23
Richard Mandel	July 15	July 22	No	July 22	Sept. 30
Queen of Pinks	July 15	July 22	No	July 22	Sept. 30
Wilson's White*	July 15	July 22	No	July 22	Sept. 30
Little America	July 15	Aug. 5**	No	July 22	Oct. 3
Bonnaffon DeLuxe	July 15	July 22	No	July 22	Oct. 7
Blazing Gold*	July 22	July 29	No	July 29	Sept. 23
Granite State	July 22	July 29	No	July 29	Sept. 30
Richard Mandel	July 22	July 29	No	July 29	Oct. 7
Queen of Pinks	July 22	July 29	No	July 29	Oct. 7
Wilson's White*	July 22	July 29	No	July 29	Oct. 7
Little America	July 22	Aug. 12**	No	July 29	Oct. 10
Bonnaffon DeLuxe	July 22	July 29	No	July 29	Oct. 14
Blazing Gold*	July 29	Aug. 5	Aug. 1-Aug. 4	Aug. 5	Sept. 30
Granite State	July 29	Aug. 5	Aug. 1-Aug. 4	Aug. 5	Oct. 7
Royal Bronze*	July 29	Aug. 19**	Aug. 1-Aug. 4	Aug. 5	Oct. 10
Richard Mandel	July 29	Aug. 5	Aug. 1-Aug. 4	Aug. 5	Oct. 14
Queen of Pinks	July 29	Aug. 5	Aug. 1-Aug. 4	Aug. 5	Oct. 14
Wilson's White*	July 29	Aug. 5	Aug. 1-Aug. 4	Aug. 5	Oct. 14
Gypsy	July 29	Aug. 5	Aug. 1-Aug. 4	Aug. 5	Oct. 14
Bronze Masterpiece	July 29	Aug. 19**	Aug. 1-Aug. 4	Aug. 5	Oct. 17
Copperhead	July 29	Aug. 19**	Aug. 1-Aug. 4	Aug. 5	Oct. 17
Little America	July 29	Aug. 19**	Aug. 1-Aug. 4	Aug. 5	Oct. 17
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	July 29	Aug. 19**	Aug. 1-Aug. 4	Aug. 5	Oct. 17
Bonnaffon DeLuxe	July 29	Aug. 5	Aug. 1-Aug. 4	Aug. 5	Oct. 21
Blazing Gold*	Aug. 5	Aug. 12	Aug. 5-Aug. 11	Aug. 12	Oct. 7
Granite State	Aug. 5	Aug. 12	Aug. 5-Aug. 11	Aug. 12	Oct. 14
Royal Bronze*	Aug. 5	Aug. 26**	Aug. 5-Aug. 11	Aug. 12	Oct. 17
Richard Mandel	Aug. 5	Aug. 12	Aug. 5-Aug. 11	Aug. 12	Oct. 21
Queen of Pinks	Aug. 5	Aug. 12	Aug. 5-Aug. 11	Aug. 12	Oct. 21
Wilson's White*	Aug. 5	Aug. 12	Aug. 5-Aug. 11	Aug. 12	Oct. 21
Gypsy	Aug. 5	Aug. 12	Aug. 5-Aug. 11	Aug. 12	Oct. 21
Bronze Masterpiece	Aug. 5	Aug. 26**	Aug. 5-Aug. 11	Aug. 12	Oct. 24
Copperhead	Aug. 5	Aug. 26**	Aug. 5-Aug. 11	Aug. 12	Oct. 24
Little America	Aug. 5	Aug. 26**	Aug. 5-Aug. 11	Aug. 12	Oct. 24
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 5	Aug. 26**	Aug. 5-Aug. 11	Aug. 12	Oct. 24
Bonnaffon DeLuxe	Aug. 5	Aug. 12	Aug. 5-Aug. 11	Aug. 12	Oct. 28
Blazing Gold*	Aug. 12	Aug. 19	Aug. 12-Aug. 18	Aug. 19	Oct. 14
Granite State	Aug. 12	Aug. 19	Aug. 12-Aug. 18	Aug. 19	Oct. 21
Royal Bronze*	Aug. 12	Sept. 2**	Aug. 12-Aug. 18	Aug. 19	Oct. 24
Richard Mandel	Aug. 12	Aug. 19	Aug. 12-Aug. 18	Aug. 19	Oct. 28
Queen of Pinks	Aug. 12	Aug. 19	Aug. 12-Aug. 18	Aug. 19	Oct. 28
Wilson's White*	Aug. 12	Aug. 19	Aug. 12-Aug. 18	Aug. 19	Oct. 28
Gypsy	Aug. 12	Aug. 19	Aug. 12-Aug. 18	Aug. 19	Oct. 28
Bronze Masterpiece	Aug. 12	Sept. 2**	Aug. 12-Aug. 18	Aug. 19	Oct. 31
Copperhead	Aug. 12	Sept. 2**	Aug. 12-Aug. 18	Aug. 19	Oct. 31
Little America	Aug. 12	Sept. 2**	Aug. 12-Aug. 18	Aug. 19	Oct. 31
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 12	Sept. 2**	Aug. 12-Aug. 18	Aug. 19	Oct. 31
Bonnaffon DeLuxe	Aug. 12	Aug. 19	Aug. 12-Aug. 18	Aug. 19	Nov. 4

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.

2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Blazing Gold*	Aug. 19	Aug. 26	Aug. 19-Aug. 25	Aug. 26	Oct. 21
Granite State	Aug. 19	Aug. 26	Aug. 19-Aug. 25	Aug. 26	Oct. 28
Royal Bronze*	Aug. 19	Sept. 9**	Aug. 19-Aug. 25	Aug. 26	Oct. 31
Richard Mandel	Aug. 19	Aug. 26	Aug. 19-Aug. 25	Aug. 26	Nov. 4
Queen of Pinks	Aug. 19	Aug. 26	Aug. 19-Aug. 25	Aug. 26	Nov. 4
Wilson's White*	Aug. 19	Aug. 26	Aug. 19-Aug. 25	Aug. 26	Nov. 4
Gypsy	Aug. 19	Aug. 26	Aug. 19-Aug. 25	Aug. 26	Nov. 4
Bronze Masterpiece	Aug. 19	Sept. 9**	Aug. 19-Aug. 25	Aug. 26	Nov. 7
Copperhead	Aug. 19	Sept. 9**	Aug. 19-Aug. 25	Aug. 26	Nov. 7
Little America	Aug. 19	Sept. 9**	Aug. 19-Aug. 25	Aug. 26	Nov. 7
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 19	Sept. 9**	Aug. 19-Aug. 25	Aug. 26	Nov. 7
Bonnaffon DeLuxe	Aug. 19	Aug. 26	Aug. 19-Aug. 25	Aug. 26	Nov. 11
Blazing Gold*	Aug. 26	Sept. 2	Aug. 26-Sept. 1	Sept. 2	Oct. 28
Granite State	Aug. 26	Sept. 2	Aug. 26-Sept. 1	Sept. 2	Nov. 4
Royal Bronze*	Aug. 26	Sept. 16**	Aug. 26-Sept. 1	Sept. 2	Nov. 7
Richard Mandel	Aug. 26	Sept. 2	Aug. 26-Sept. 1	Sept. 2	Nov. 11
Queen of Pinks	Aug. 26	Sept. 2	Aug. 26-Sept. 1	Sept. 2	Nov. 11
Wilson's White*	Aug. 26	Sept. 2	Aug. 26-Sept. 1	Sept. 2	Nov. 11
Gypsy	Aug. 26	Sept. 2	Aug. 26-Sept. 1	Sept. 2	Nov. 11
Bronze Masterpiece	Aug. 26	Sept. 16**	Aug. 26-Sept. 1	Sept. 2	Nov. 14
Copperhead	Aug. 26	Sept. 16**	Aug. 26-Sept. 1	Sept. 2	Nov. 14
Little America	Aug. 26	Sept. 16**	Aug. 26-Sept. 1	Sept. 2	Nov. 14
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 26	Sept. 16**	Aug. 26-Sept. 1	Sept. 2	Nov. 14
Bonnaffon DeLuxe	Aug. 26	Sept. 2	Aug. 26-Sept. 1	Sept. 2	Nov. 18
Blazing Gold*	Sept. 2	Sept. 9	Sept. 2-Sept. 8	Sept. 9	Nov. 4
Granite State	Sept. 2	Sept. 9	Sept. 2-Sept. 8	Sept. 9	Nov. 11
Royal Bronze*	Sept. 2	Sept. 23**	Sept. 2-Sept. 8	Sept. 9	Nov. 14
Richard Mandel	Sept. 2	Sept. 9	Sept. 2-Sept. 8	Sept. 9	Nov. 18
Queen of Pinks	Sept. 2	Sept. 9	Sept. 2-Sept. 8	Sept. 9	Nov. 18
Wilson's White*	Sept. 2	Sept. 9	Sept. 2-Sept. 8	Sept. 9	Nov. 18
Gypsy	Sept. 2	Sept. 9	Sept. 2-Sept. 8	Sept. 9	Nov. 18
Bronze Masterpiece	Sept. 2	Sept. 23**	Sept. 2-Sept. 8	Sept. 9	Nov. 21
Copperhead	Sept. 2	Sept. 23**	Sept. 2-Sept. 8	Sept. 9	Nov. 21
Little America	Sept. 2	Sept. 23**	Sept. 2-Sept. 8	Sept. 9	Nov. 21
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 2	Sept. 23**	Sept. 2-Sept. 8	Sept. 9	Nov. 21
Bonnaffon DeLuxe	Sept. 2	Sept. 9	Sept. 2-Sept. 8	Sept. 9	Nov. 25
Blazing Gold*	Sept. 9	Sept. 16	Sept. 9-Sept. 15	Sept. 16	Nov. 11
Granite State	Sept. 9	Sept. 16	Sept. 9-Sept. 15	Sept. 16	Nov. 18
Royal Bronze*	Sept. 9	Sept. 30**	Sept. 9-Sept. 15	Sept. 16	Nov. 21
Richard Mandel	Sept. 9	Sept. 16	Sept. 9-Sept. 15	Sept. 16	Nov. 25
Queen of Pinks	Sept. 9	Sept. 16	Sept. 9-Sept. 15	Sept. 16	Nov. 25
Wilson's White*	Sept. 9	Sept. 16	Sept. 9-Sept. 15	Sept. 16	Nov. 25
Gypsy	Sept. 9	Sept. 16	Sept. 9-Sept. 15	Sept. 16	Nov. 25
Bronze Masterpiece	Sept. 9	Sept. 30**	Sept. 9-Sept. 15	Sept. 16	Nov. 28
Copperhead	Sept. 9	Sept. 30**	Sept. 9-Sept. 15	Sept. 16	Nov. 28
Little America	Sept. 9	Sept. 30**	Sept. 9-Sept. 15	Sept. 16	Nov. 28
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 9	Sept. 30**	Sept. 9-Sept. 15	Sept. 16	Nov. 28
Bonnaffon DeLuxe	Sept. 9	Sept. 16	Sept. 9-Sept. 15	Sept. 16	Dec. 2
Blazing Gold*	Sept. 16	Sept. 23	Sept. 16-Sept. 22	No	Nov. 18
Granite State	Sept. 16	Sept. 23	Sept. 16-Sept. 22	No	Nov. 25
Royal Bronze*	Sept. 16	Oct. 7**	Sept. 16-Sept. 22	No	Nov. 28
Richard Mandel	Sept. 16	Sept. 23	Sept. 16-Sept. 22	No	Dec. 2
Queen of Pinks	Sept. 16	Sept. 23	Sept. 16-Sept. 22	No	Dec. 2
Wilson's White*	Sept. 16	Sept. 23	Sept. 16-Sept. 22	No	Dec. 2
Gypsy	Sept. 16	Sept. 23	Sept. 16-Sept. 22	No	Dec. 2
Bronze Masterpiece	Sept. 16	Oct. 7**	Sept. 16-Sept. 22	No	Dec. 5
Copperhead	Sept. 16	Oct. 7**	Sept. 16-Sept. 22	No	Dec. 5
Little America	Sept. 16	Oct. 7**	Sept. 16-Sept. 22	No	Dec. 5
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 16	Oct. 7**	Sept. 16-Sept. 22	No	Dec. 5
Bonnaffon DeLuxe	Sept. 16	Sept. 23	Sept. 16-Sept. 22	No	Dec. 9

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.

2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Blazing Gold*	Sept. 23	Sept. 30	Sept. 23-Sept. 29	No	Nov. 25
Granite State	Sept. 23	Sept. 30	Sept. 23-Sept. 29	No	Dec. 2
Royal Bronze*	Sept. 23	Oct. 14**	Sept. 23-Sept. 29	No	Dec. 5
Richard Mandel	Sept. 23	Sept. 30	Sept. 23-Sept. 29	No	Dec. 9
Queen of Pinks	Sept. 23	Sept. 30	Sept. 23-Sept. 29	No	Dec. 9
Wilson's White*	Sept. 23	Sept. 30	Sept. 23-Sept. 29	No	Dec. 9
Gypsy	Sept. 23	Sept. 30	Sept. 23-Sept. 29	No	Dec. 9
Bronze Masterpiece	Sept. 23	Oct. 14**	Sept. 23-Sept. 29	No	Dec. 12
Copperhead	Sept. 23	Oct. 14**	Sept. 23-Sept. 29	No	Dec. 12
Little America	Sept. 23	Oct. 14**	Sept. 23-Sept. 29	No	Dec. 12
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 23	Oct. 14**	Sept. 23-Sept. 29	No	Dec. 12
Bonnaffon DeLuxe	Sept. 23	Sept. 30	Sept. 23-Sept. 29	No	Dec. 16
Blazing Gold*	Sept. 30	Oct. 7	Sept. 30-Oct. 6	No	Dec. 2
Granite State	Sept. 30	Oct. 7	Sept. 30-Oct. 6	No	Dec. 9
Royal Bronze*	Sept. 30	Oct. 21**	Sept. 30-Oct. 6	No	Dec. 12
Richard Mandel	Sept. 30	Oct. 7	Sept. 30-Oct. 6	No	Dec. 16
Queen of Pinks	Sept. 30	Oct. 7	Sept. 30-Oct. 6	No	Dec. 16
Wilson's White*	Sept. 30	Oct. 7	Sept. 30-Oct. 6	No	Dec. 16
Gypsy	Sept. 30	Oct. 7	Sept. 30-Oct. 6	No	Dec. 16
Bronze Masterpiece	Sept. 30	Oct. 21**	Sept. 30-Oct. 6	No	Dec. 19
Copperhead	Sept. 30	Oct. 21**	Sept. 30-Oct. 6	No	Dec. 19
Little America	Sept. 30	Oct. 21**	Sept. 30-Oct. 6	No	Dec. 19
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 30	Oct. 21**	Sept. 30-Oct. 6	No	Dec. 19
Bonnaffon DeLuxe	Sept. 30	Oct. 7	Sept. 30-Oct. 6	No	Dec. 23
Blazing Gold*	Oct. 7	Oct. 14	Oct. 7-Oct. 13	No	Dec. 9
Granite State	Oct. 7	Oct. 14	Oct. 7-Oct. 13	No	Dec. 16
Royal Bronze*	Oct. 7	Oct. 28**	Oct. 7-Oct. 13	No	Dec. 19
Richard Mandel	Oct. 7	Oct. 14	Oct. 7-Oct. 13	No	Dec. 23
Queen of Pinks	Oct. 7	Oct. 14	Oct. 7-Oct. 13	No	Dec. 23
Wilson's White*	Oct. 7	Oct. 14	Oct. 7-Oct. 13	No	Dec. 23
Gypsy	Oct. 7	Oct. 14	Oct. 7-Oct. 13	No	Dec. 23
Bronze Masterpiece	Oct. 7	Oct. 28**	Oct. 7-Oct. 13	No	Dec. 26
Copperhead	Oct. 7	Oct. 28**	Oct. 7-Oct. 13	No	Dec. 26
Little America	Oct. 7	Oct. 28**	Oct. 7-Oct. 13	No	Dec. 26
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Oct. 7	Oct. 28**	Oct. 7-Oct. 13	No	Dec. 26
Bonnaffon DeLuxe	Oct. 7	Oct. 14	Oct. 7-Oct. 13	No	Dec. 30
Blazing Gold*	Oct. 14	Oct. 21	Oct. 14-Oct. 20	No	Dec. 16
Granite State	Oct. 14	Oct. 21	Oct. 14-Oct. 20	No	Dec. 23
Royal Bronze*	Oct. 14	Nov. 4**	Oct. 14-Oct. 20	No	Dec. 26
Richard Mandel	Oct. 14	Oct. 21	Oct. 14-Oct. 20	No	Dec. 30
Queen of Pinks	Oct. 14	Oct. 21	Oct. 14-Oct. 20	No	Dec. 30
Wilson's White*	Oct. 14	Oct. 21	Oct. 14-Oct. 20	No	Dec. 30
Gypsy	Oct. 14	Oct. 21	Oct. 14-Oct. 20	No	Dec. 30
Bronze Masterpiece	Oct. 14	Nov. 4**	Oct. 14-Oct. 20	No	Jan. 2
Copperhead	Oct. 14	Nov. 4**	Oct. 14-Oct. 20	No	Jan. 2
Little America	Oct. 14	Nov. 4**	Oct. 14-Oct. 20	No	Jan. 2
Bonnaffon DeLuxe	Oct. 14	Oct. 21	Oct. 14-Oct. 20	No	Jan. 6
Blazing Gold*	Oct. 21	Oct. 28	Oct. 21-Oct. 27	No	Dec. 23
Royal Bronze*	Oct. 21	Nov. 11**	Oct. 21-Oct. 27	No	Jan. 2
Gypsy	Oct. 21	Oct. 28	Oct. 21-Oct. 27	No	Jan. 6
Queen of Pinks	Oct. 21	Oct. 28	Oct. 21-Oct. 27	No	Jan. 6
Bronze Masterpiece	Oct. 21	Nov. 11**	Oct. 21-Oct. 27	No	Jan. 9
Copperhead	Oct. 21	Nov. 11**	Oct. 21-Oct. 27	No	Jan. 9
Little America	Oct. 21	Nov. 4**	Oct. 21-Oct. 27	No	Jan. 9
Bonnaffon DeLuxe	Oct. 21	Oct. 28	Oct. 21-Oct. 27	No	Jan. 13
Granite State	Oct. 21	Oct. 31	Oct. 21-Oct. 30	No	Jan. 2
Wilson's White*	Oct. 21	Oct. 31	Oct. 21-Oct. 30	No	Jan. 9

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.
2. See page 14 for lighting periods in other latitudes.

SINGLE PINCH POT PLANT SCHEDULES

Variety	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Flower
Royal Bronze*	Oct. 28	Nov. 18**	Oct. 28-Nov. 3	No	Jan. 9
Gypsy	Oct. 28	Nov. 4	Oct. 28-Nov. 3	No	Jan. 13
Queen of Pinks	Oct. 28	Nov. 4	Oct. 28-Nov. 3	No	Jan. 13
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Oct. 28	Nov. 18**	Oct. 28-Nov. 3	No	Jan. 13
Bronze Masterpiece	Oct. 28	Nov. 18**	Oct. 28-Nov. 3	No	Jan. 16
Copperhead	Oct. 28	Nov. 18**	Oct. 28-Nov. 3	No	Jan. 16
Little America	Oct. 28	Nov. 11**	Oct. 28-Nov. 3	No	Jan. 16
Bonnaffon DeLuxe	Oct. 28	Nov. 4	Oct. 28-Nov. 3	No	Jan. 20
Granite State	Oct. 28	Nov. 7	Oct. 28-Nov. 6	No	Jan. 9
Wilson's White*	Oct. 28	Nov. 7	Oct. 28-Nov. 6	No	Jan. 16
Royal Bronze*	Nov. 4	Nov. 25**	Nov. 4-Nov. 10	No	Jan. 16
Gypsy	Nov. 4	Nov. 11	Nov. 4-Nov. 10	No	Jan. 20
Queen of Pinks	Nov. 4	Nov. 11	Nov. 4-Nov. 10	No	Jan. 20
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Nov. 4	Nov. 25**	Nov. 4-Nov. 10	No	Jan. 20
Bronze Masterpiece	Nov. 4	Nov. 25**	Nov. 4-Nov. 10	No	Jan. 23
Copperhead	Nov. 4	Nov. 25**	Nov. 4-Nov. 10	No	Jan. 23
Little America	Nov. 4	Nov. 18**	Nov. 4-Nov. 10	No	Jan. 23
Bonnaffon DeLuxe	Nov. 4	Nov. 11	Nov. 4-Nov. 10	No	Jan. 27
Granite State	Nov. 4	Nov. 14	Nov. 4-Nov. 13	No	Jan. 16
Wilson's White*	Nov. 4	Nov. 14	Nov. 4-Nov. 13	No	Jan. 23
Royal Bronze*	Nov. 11	Dec. 2**	Nov. 11-Nov. 17	No	Jan. 23
Gypsy	Nov. 11	Nov. 18	Nov. 11-Nov. 17	No	Jan. 27
Queen of Pinks	Nov. 11	Nov. 18	Nov. 11-Nov. 17	No	Jan. 27
Lace varieties: Yellow, Gold, } Hooked, and Queen's Lace }	Nov. 11	Dec. 2**	Nov. 11-Nov. 17	No	Jan. 27
Bronze Masterpiece	Nov. 11	Dec. 2**	Nov. 11-Nov. 17	No	Jan. 30
Copperhead	Nov. 11	Dec. 2**	Nov. 11-Nov. 17	No	Jan. 30
Little America	Nov. 11	Nov. 25**	Nov. 11-Nov. 17	No	Jan. 30
Bonnaffon DeLuxe	Nov. 11	Nov. 18	Nov. 11-Nov. 17	No	Feb. 3
Granite State	Nov. 11	Nov. 21	Nov. 11-Nov. 20	No	Jan. 23
Wilson's White*	Nov. 11	Nov. 21	Nov. 11-Nov. 20	No	Jan. 30

TWO-PINCH POT PLANT SCHEDULE

Varieties	Pot (See Footnote 3)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Final Pinch	Flower
Blazing Gold*	Apr. 7	Apr. 15	Apr. 7-Apr. 30	May 6	May 6	July 1
Granite State	Apr. 7	Apr. 15	Apr. 7-Apr. 30	May 6	May 6	July 8
Wilson's White*	Apr. 7	Apr. 15	Apr. 7-Apr. 30	May 6	May 6	July 15
Richard Mandel	Apr. 7	Apr. 15	Apr. 7-Apr. 30	May 6	May 6	July 15
Bonnaffon DeLuxe	Apr. 7	Apr. 15	Apr. 7-Apr. 30	May 6	May 6	July 22
Blazing Gold*	Apr. 15	Apr. 22	Apr. 15-Apr. 30	May 13	May 13	July 8
Granite State	Apr. 15	Apr. 22	Apr. 15-Apr. 30	May 13	May 13	July 15
Wilson's White*	Apr. 15	Apr. 22	Apr. 15-Apr. 30	May 13	May 13	July 22
Richard Mandel	Apr. 15	Apr. 22	Apr. 15-Apr. 30	May 13	May 13	July 22
Bonnaffon DeLuxe	Apr. 15	Apr. 22	Apr. 15-Apr. 30	May 13	May 13	July 29
Blazing Gold*	Apr. 22	Apr. 29	Apr. 22-Apr. 30	May 20	May 20	July 15
Granite State	Apr. 22	Apr. 29	Apr. 22-Apr. 30	May 20	May 20	July 22
Wilson's White*	Apr. 22	Apr. 29	Apr. 22-Apr. 30	May 20	May 20	July 29
Richard Mandel	Apr. 22	Apr. 29	Apr. 22-Apr. 30	May 20	May 20	July 29
Bonnaffon DeLuxe	Apr. 22	Apr. 29	Apr. 22-Apr. 30	May 20	May 20	Aug. 5
Blazing Gold*	Apr. 29	May 6	Apr. 29-Apr. 30	May 27	May 27	July 22
Granite State	Apr. 29	May 6	Apr. 29-Apr. 30	May 27	May 27	July 29
Wilson's White*	Apr. 29	May 6	Apr. 29-Apr. 30	May 27	May 27	Aug. 5
Richard Mandel	Apr. 29	May 6	Apr. 29-Apr. 30	May 27	May 27	Aug. 5
Bonnaffon DeLuxe	Apr. 29	May 6	Apr. 29-Apr. 30	May 27	May 27	Aug. 12
Blazing Gold*	May 6	May 13	No	June 3	June 3	July 29
Granite State	May 6	May 13	No	June 3	June 3	Aug. 5
Wilson's White*	May 6	May 13	No	June 3	June 3	Aug. 12
Richard Mandel	May 6	May 13	No	June 3	June 3	Aug. 12
Bonnaffon DeLuxe	May 6	May 13	No	June 3	June 3	Aug. 19

**Pinch delayed to improve height of plant.

1. Use 4 cuttings per 6 inch pot, 5 cuttings per pot on (*) varieties.

2. See page 14 for lighting periods in other latitudes.

3. For 2-pinch schedule, use 3 cuttings per 6 inch pot; 4 cuttings per pot on (*) varieties.

TWO-PINCH POT PLANT SCHEDULE

Varieties	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Final Pinch	Flower
Blazing Gold*	May 13	May 20	No	June 10	June 10	Aug. 5
Granite State	May 13	May 20	No	June 10	June 10	Aug. 12
Wilson's White*	May 13	May 20	No	June 10	June 10	Aug. 19
Richard Mandel	May 13	May 20	No	June 10	June 10	Aug. 19
Bonnaffon DeLuxe	May 13	May 20	No	June 10	June 10	Aug. 26
Blazing Gold*	May 20	May 27	No	June 17	June 17	Aug. 12
Granite State	May 20	May 27	No	June 17	June 17	Aug. 19
Wilson's White*	May 20	May 27	No	June 17	June 17	Aug. 26
Richard Mandel	May 20	May 27	No	June 17	June 17	Aug. 26
Bonnaffon DeLuxe	May 20	May 27	No	June 17	June 17	Sept. 2
Blazing Gold*	May 27	June 3	No	June 24	June 24	Aug. 19
Granite State	May 27	June 3	No	June 24	June 24	Aug. 26
Wilson's White*	May 27	June 3	No	June 24	June 24	Sept. 2
Richard Mandel	May 27	June 3	No	June 24	June 24	Sept. 2
Queen of Pinks	May 27	June 3	No	June 24	June 24	Sept. 2
Bonnaffon DeLuxe	May 27	June 3	No	June 24	June 24	Sept. 9
Blazing Gold*	June 3	June 10	No	July 1	July 1	Aug. 26
Granite State	June 3	June 10	No	July 1	July 1	Sept. 2
Wilson's White*	June 3	June 10	No	July 1	July 1	Sept. 9
Richard Mandel	June 3	June 10	No	July 1	July 1	Sept. 9
Queen of Pinks	June 3	June 10	No	July 1	July 1	Sept. 9
Bonnaffon DeLuxe	June 3	June 10	No	July 1	July 1	Sept. 16
Blazing Gold*	June 10	June 17	No	July 8	July 8	Sept. 2
Granite State	June 10	June 17	No	July 8	July 8	Sept. 9
Wilson's White*	June 10	June 17	No	July 8	July 8	Sept. 16
Richard Mandel	June 10	June 17	No	July 8	July 8	Sept. 23
Queen of Pinks	June 10	June 17	No	July 8	July 8	Sept. 23
Little America	June 10	June 17	No	July 8	July 15**	Sept. 26
Bonnaffon DeLuxe	June 10	June 17	No	July 8	July 8	Sept. 30
Blazing Gold*	June 17	June 24	No	July 15	July 15	Sept. 9
Granite State	June 17	June 24	No	July 15	July 15	Sept. 16
Wilson's White*	June 17	June 24	No	July 15	July 15	Sept. 23
Richard Mandel	June 17	June 24	No	July 15	July 15	Sept. 23
Queen of Pinks	June 17	June 24	No	July 15	July 15	Sept. 23
Little America	June 17	June 24	No	July 15	July 22**	Sept. 26
Bonnaffon DeLuxe	June 17	June 24	No	July 15	July 15	Sept. 30
Blazing Gold*	June 24	July 1	No	July 22	July 22	Sept. 16
Granite State	June 24	July 1	No	July 22	July 22	Sept. 23
Wilson's White*	June 24	July 1	No	July 22	July 22	Sept. 30
Richard Mandel	June 24	July 1	No	July 22	July 22	Sept. 30
Queen of Pinks	June 24	July 1	No	July 22	July 22	Sept. 30
Little America	June 24	July 1	No	July 22	July 29**	Oct. 3
Bonnaffon DeLuxe	June 24	July 1	No	July 22	July 22	Oct. 7
Blazing Gold*	July 1	July 8	No	July 29	July 29	Sept. 23
Granite State	July 1	July 8	No	July 29	July 29	Sept. 30
Wilson's White*	July 1	July 8	No	July 29	July 29	Oct. 7
Richard Mandel	July 1	July 8	No	July 29	July 29	Oct. 7
Queen of Pinks	July 1	July 8	No	July 29	July 29	Oct. 7
Little America	July 1	July 8	No	July 29	Aug. 5**	Oct. 10
Bonnaffon DeLuxe	July 1	July 8	No	July 29	July 29	Oct. 14
Blazing Gold*	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 5	Sept. 30
Granite State	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 5	Oct. 7
Royal Bronze*	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 12**	Oct. 10
Wilson's White*	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 5	Oct. 14
Richard Mandel	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 5	Oct. 14
Queen of Pinks	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 5	Oct. 14
Gypsy	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 5	Oct. 14
Little America	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 12**	Oct. 17
Bronze Masterpiece	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 12**	Oct. 17
Copperhead	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 12**	Oct. 17
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 12**	Oct. 17
Bonnaffon DeLuxe	July 8	July 15	Aug. 1-Aug. 4	Aug. 5	Aug. 5	Oct. 21

**Pinch delayed to improve height of plant.

1. Use 3 cuttings per 6 inch pot; 4 cuttings per pot on (*) varieties.

2. See page 14 for lighting periods in other latitudes.

TWO-PINCH POT PLANT SCHEDULE

Varieties	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Final Pinch	Flower
Blazing Gold*	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 12	Oct. 7
Granite State	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 12	Oct. 14
Royal Bronze*	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 19**	Oct. 17
Wilson's White*	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 12	Oct. 21
Richard Mandel	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 12	Oct. 21
Queen of Pinks	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 12	Oct. 21
Gypsy	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 12	Oct. 21
Little America	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 19**	Oct. 24
Bronze Masterpiece	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 19**	Oct. 24
Copperhead	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 19**	Oct. 24
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 19**	Oct. 24
Bonnaffon DeLuxe	July 15	July 22	Aug. 1-Aug. 11	Aug. 12	Aug. 12	Oct. 28
Blazing Gold*	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 19	Oct. 14
Granite State	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 19	Oct. 21
Royal Bronze*	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 26**	Oct. 24
Wilson's White*	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 19	Oct. 28
Richard Mandel	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 19	Oct. 28
Queen of Pinks	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 19	Oct. 28
Gypsy	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 19	Oct. 28
Little America	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 26**	Oct. 31
Bronze Masterpiece	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 26**	Oct. 31
Copperhead	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 26**	Oct. 31
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 26**	Oct. 31
Bonnaffon DeLuxe	July 22	July 29	Aug. 1-Aug. 18	Aug. 19	Aug. 19	Nov. 4
Blazing Gold*	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Aug. 26	Oct. 21
Granite State	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Aug. 26	Oct. 28
Royal Bronze*	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Sept. 2**	Oct. 31
Wilson's White*	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Aug. 26	Nov. 4
Richard Mandel	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Aug. 26	Nov. 4
Queen of Pinks	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Aug. 26	Nov. 4
Gypsy	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Aug. 26	Nov. 4
Little America	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Sept. 2**	Nov. 7
Bronze Masterpiece	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Sept. 2**	Nov. 7
Copperhead	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Sept. 2**	Nov. 7
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Sept. 2**	Nov. 7
Bonnaffon DeLuxe	July 29	Aug. 5	Aug. 1-Aug. 25	Aug. 26	Aug. 26	Nov. 11
Blazing Gold*	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 2	Oct. 28
Granite State	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 2	Nov. 4
Royal Bronze*	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 9**	Nov. 7
Wilson's White*	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 2	Nov. 11
Richard Mandel	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 2	Nov. 11
Queen of Pinks	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 2	Nov. 11
Gypsy	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 2	Nov. 11
Little America	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 9**	Nov. 14
Bronze Masterpiece	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 9**	Nov. 14
Copperhead	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 9**	Nov. 14
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 9**	Nov. 14
Bonnaffon DeLuxe	Aug. 5	Aug. 12	Aug. 5-Sept. 1	Sept. 2	Sept. 2	Nov. 18
Blazing Gold*	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 9	Nov. 4
Granite State	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 9	Nov. 11
Royal Bronze*	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 16**	Nov. 14
Wilson's White*	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 9	Nov. 18
Richard Mandel	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 9	Nov. 18
Queen of Pinks	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 9	Nov. 18
Gypsy	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 9	Nov. 18
Little America	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 16**	Nov. 21
Bronze Masterpiece	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 16**	Nov. 21
Copperhead	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 16**	Nov. 21
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 16**	Nov. 21
Bonnaffon DeLuxe	Aug. 12	Aug. 19	Aug. 12-Sept. 8	Sept. 9	Sept. 9	Nov. 25

**Pinch delayed to improve height of plant.

1. Use 3 cuttings per 6 inch pot; 4 cuttings per pot on (*) varieties.

2. See page 14 for lighting periods in other latitudes.

TWO-PINCH POT PLANT SCHEDULE

Varieties	Pot (See Footnote 1)	Pinch	Lighting Period 40-45° Latitude (2)	Shade	Final Pinch	Flower
Blazing Gold*	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 16	Nov. 11
Granite State	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 16	Nov. 18
Royal Bronze*	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 23**	Nov. 21
Wilson's White*	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 16	Nov. 25
Richard Mandel	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 16	Nov. 25
Queen of Pinks	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 16	Nov. 25
Gypsy	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 16	Nov. 25
Little America	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 23**	Nov. 28
Bronze Masterpiece	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 23**	Nov. 28
Copperhead	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 23**	Nov. 28
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 23**	Nov. 28
Bonnaffon DeLuxe	Aug. 19	Aug. 26	Aug. 19-Sept. 15	No	Sept. 16	Dec. 2
Blazing Gold*	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 23	Nov. 18
Granite State	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 23	Nov. 25
Royal Bronze*	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 30**	Nov. 28
Wilson's White*	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 23	Dec. 2
Richard Mandel	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 23	Dec. 2
Queen of Pinks	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 23	Dec. 2
Gypsy	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 23	Dec. 2
Little America	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 30**	Dec. 5
Bronze Masterpiece	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 30**	Dec. 5
Copperhead	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 30**	Dec. 5
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 30**	Dec. 5
Bonnaffon DeLuxe	Aug. 26	Sept. 2	Aug. 26-Sept. 22	No	Sept. 23	Dec. 9
Blazing Gold*	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Sept. 30	Nov. 25
Granite State	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Sept. 30	Dec. 2
Royal Bronze*	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Oct. 7**	Dec. 5
Wilson's White*	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Sept. 30	Dec. 9
Richard Mandel	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Sept. 30	Dec. 9
Queen of Pinks	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Sept. 30	Dec. 9
Gypsy	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Sept. 30	Dec. 9
Little America	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Oct. 7**	Dec. 12
Bronze Masterpiece	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Oct. 7**	Dec. 12
Copperhead	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Oct. 7**	Dec. 12
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Oct. 7**	Dec. 12
Bonnaffon DeLuxe	Sept. 2	Sept. 9	Sept. 2-Sept. 29	No	Sept. 30	Dec. 16
Blazing Gold*	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 7	Dec. 2
Granite State	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 7	Dec. 9
Royal Bronze*	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 14**	Dec. 12
Wilson's White*	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 7	Dec. 16
Richard Mandel	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 7	Dec. 16
Queen of Pinks	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 7	Dec. 16
Gypsy	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 7	Dec. 16
Little America	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 14**	Dec. 19
Bronze Masterpiece	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 14**	Dec. 19
Copperhead	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 14**	Dec. 19
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 14**	Dec. 19
Bonnaffon DeLuxe	Sept. 9	Sept. 16	Sept. 9-Oct. 6	No	Oct. 7	Dec. 23
Blazing Gold*	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 14	Dec. 9
Granite State	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 14	Dec. 16
Royal Bronze*	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 21**	Dec. 19
Wilson's White*	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 14	Dec. 23
Richard Mandel	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 14	Dec. 23
Queen of Pinks	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 14	Dec. 23
Gypsy	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 14	Dec. 23
Little America	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 21**	Dec. 26
Bronze Masterpiece	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 21**	Dec. 26
Copperhead	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 21**	Dec. 26
Ind. varieties*: White, Yellow, Dk. Yellow, Pink, Golden Bronze, Dk. Bronze	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 21**	Dec. 26
Bonnaffon DeLuxe	Sept. 16	Sept. 23	Sept. 16-Oct. 13	No	Oct. 14	Dec. 30

**Pinch delayed to improve height of plant.

1. Use 3 cuttings per 6 inch pot; 4 cuttings per pot on (*) varieties.

2. See page 14 for lighting periods in other latitudes.

New Varieties for 1954

SPRAY TYPES

WHITE

MARSHMALLOW

October 5

(Yoder) Heavily petalled pure white single. Improves the growth and durability of Chris. Columbus. Recommended as a garden variety and Mother's Day pot plant. Dwarf, compact plant. 50 cuttings, \$5.00.

SILVERTONE

October 24

(Yoder) Intermediate white single. Similar in habit to Reward and Buckskin. August and September cloth house and May through October in the greenhouse. 50 cuttings, \$5.00.

SILVER CLOUD

November 1

(Yoder) Intermediate white single. Heavily petalled, better form than Halo. A good producer. Recommended April through October with use restricted to the greenhouse. 50 cuttings, \$5.00.

FREEDOM

November 5

(Yoder) Intermediate pure white single. Outstanding for spray formation and flower substance. Clean, vigorous growth; improves Halo in all respects. Recommended for August and September cloth house, and May through November in the greenhouse. Excellent shipping and keeping qualities. 50 cuttings, \$5.00.

WHITE ENCHANTRESS

December 5

(Neal) Sport of Enchantress. 50 cuttings, \$5.00.

WHITETOP

November 5

(Yoder) Intermediate pure white decorative pompon. Vigorous growth habit. Recommended April through November in the greenhouse and August through October in the cloth house; also as a medium sized disbud for pots. It fills the need for a pure white pompon in the greenhouse during the spring months when Encore is difficult to flower. 50 cuttings, \$5.00.

PACESETTER

November 10

(Yoder) Intermediate pure white single. Good form, petal-lage and substance. Excellent shipping quality. Growth is short and strong. Excellent for spring, summer and fall. A very fine pot plant disbud. 50 cuttings, \$5.00.

ILLINI STARLET

December 10

(Univ. of Ill.) Intermediate white anemone. Improves Garza in form, growth and clarity of color. Good production and much freer growth. Believe this is a white anemone that could replace Garza. 50 cuttings, \$5.00.

TRENTON

December 15

(DePetris) White pompon. Good form and substance plus production. An important pompon for natural flowering. 50 cuttings, \$5.00.

TALMEDA

January 5

(DePetris) Intermediate white pompon. Improves Revelation. Just about latest white pompon. Good form and substance. 50 cuttings, \$5.00.

YELLOW

ARLORA

October 15

(De Petris) Large, soft yellow, closely incurved flower. Very good substance; flower 3-3½ inches diameter. Should prove good spring and fall pot plant. 50 cuttings, \$5.00.

CREAMPUFF

October 20

(Yoder) Intermediate cream white single. Strong, fast growth and very heavy production. A beautiful new color for April through June. Excellent in the late September and October cloth house. 50 cuttings, \$5.00.

ORDALIA

October 25

(DePetris) Deep golden yellow, semi-incurved decorative. Size 3-3½ inches. Excellent keeper. Very vigorous and bushy growth. Blooms in the garden in October. A large pot plant disbud. 50 cuttings, \$5.00.

STARLIGHT

October 25

(Yoder) Large yellow single. Improves the growth and production of Starbright. Very durable; uniform response. A 9 week Yellow Valencia. Recommended April through October in the greenhouse. Makes a fine disbud in pots spring and fall. 50 cuttings, \$5.00.

AZTEC

October 28

(Yoder) Intermediate deep yellow single. Strong, wiry growth and heavy production. Especially valuable for high temperature flowering. Recommended May through October in greenhouse and August and September in cloth house. Greatly improves existing 9-week yellow single varieties in production and flower quality. 50 cuttings, \$5.00.

SAUTERNE

October 30

(Yoder) Intermediate intense yellow single. Very uniform response tolerating a wide temperature range. Improves the production, petallage and quality of Yellow Halo

and other existing yellow single varieties. Recommended May through October in the greenhouse, August through October in the cloth house. 50 cuttings, \$5.00.

GONDOLA

October 30

(Yoder) Intermediate yellow single. Outstanding form and color. Quite large flower similar to Starbright. Recommended May through October in the greenhouse and in the cloth house. Very durable with fine petallage and substance. 50 cuttings, \$5.00.

HONEYMOON

November 4

(Yoder) Large yellow single. Good form and an unusually clear yellow color. Recommended May and June in the greenhouse, and August and September in the cloth house. 50 cuttings, \$5.00.

YELLOW PARAMOUNT

November 23

(Yoder) Deep yellow sport from Paramount. Same habit as original variety. 50 cuttings, \$5.00.

YELLOW FORTUNE

December 1

(Yoder) Deep yellow sport of Fortune. 50 cuttings, \$5.00.

YELLOW ACCLAIM

December 5

(Neal) Bright yellow sport of Acclaim. 50 cuttings, \$5.00.

YELLOW SNOWCAP

December 15

(Yoder) Deep lemon yellow sport of Snowcap. 50 cuttings, \$5.00.

NEW YELLOW STANDARD

DARK YELLOW CHATTANOOGA

November 25

(Wolfe) Deep yellow sport from Chattanooga. 50 cuttings, \$5.00.

For prices for more than 50 of a variety, see page 53.



PORTRAIT

Fine new, intense pink. Excellent producer. Recommended also for pot culture. Flowers normally November 1; good thru late spring, too.

PINK

PETRISIAN MAUVE
PETRISIAN PINK
PETRISIAN ROSE

October 5

(DePetris) These are three outstanding DePetris hybrids for the garden and spring pot plants. Each: 50 cuttings, \$7.50.

SONNET

October 14

(Yoder) Intermediate salmon pink pompon. Stocky, compact growth; well adapted to the garden and a good spring pot plant. Valuable color in late September cloth house. 50 cuttings, \$5.00.

FAIRYLAND

October 15

(Yoder) Intermediate decorative; lively pink color. Very uniform response. A low temperature variety that improves Carolyn Yosick; also a spring and fall pot plant. Recommended in early cloth house and as a garden variety. 50 cuttings, \$5.00.

MAYFAIR

October 15

(Yoder) Intermediate, smooth pink single. Growth and production surpasses that of Reward. Uniform flowering response. Valuable for cut April through October in the greenhouse and July through October in the cloth house. A much needed color in a cloth house single. 50 cuttings, \$5.00.

JESTER

October 15

(Yoder) Intermediate, dark, orchid pink single. Very early variety with free, vigorous growth. 50 cuttings, \$5.00.

CITATION

October 15

(Yoder) Intermediate pink pompon. Dwarf, compact, but very sturdy growth. In color and growth it improves Queen of Pinks. A pot plant disbud. Recommended April through June and again in October. One of the best late garden varieties. 50 cuttings, \$5.00.

MIRTH

October 20

(Yoder) Intermediate light pink single. Larger than Reward. Especially valuable in spring flowering April through June. Durable and uniform response in July through October in the cloth house. 50 cuttings, \$5.00.

NEW VARIETIES FOR 1954

PRELUDE

October 24

(Yoder) Intermediate coral pink single. Clean growth habit. A beautiful pastel color, extremely effective under artificial light. Recommended flowering period April through June, and mid-September through October cloth house and greenhouse. 50 cuttings, \$5.00.

PINKETTE

October 25

(Yoder) Intermediate pink Pompon. A bread-and-butter variety to grow with Keepsake and Gold Coast. Recommended for May and June, and again in September and October in the greenhouse; also, August thru October in the cloth house. 50 cuttings, \$5.00.

VOGUE

October 25

(Yoder) Large pink single. Beautiful form and substance. Especially valuable June and July. Rigid growth habit. Improves Ballerina and Soprano. Good in August-September cloth house. 50 cuttings, \$5.00.

BLUE CHIP

November 1

(Yoder) Intermediate pink decorative. Vigorous growth and heavy production; very pleasing color. Recommended May and June in the greenhouse, and August through October in the cloth house. Also a good spring pot plant disbud. 50 cuttings, \$5.00.

PORTRAIT

November 1

(Yoder) Large pink pompon. Very heavy producer of beautiful high quality flowers. Growth is strong, compact, with excellent sprays. A versatile variety that can be grown any time 10-week varieties are used. Also responds well to partial disbudding. Tolerates a lower minimum temperature than Pandora. Excellent pot plant March through December. 50 cuttings, \$5.00.

LOTUS

November 3

(DePetris) Intermediate pink pompon. Mary McArthur growth; a high quality flower for the shading program. 50 cuttings, \$5.00.

TEMPO

November 3

(Yoder) Intermediate deep pink decorative. A 9-week Masterpiece. Rigid stem; very hard, durable flower. Recommended April through June in the greenhouse, and August and September in the cloth house. 50 cuttings, \$5.00.

PENNANT

November 10

(Yoder) Intermediate pink decorative. A dark pink Masterpiece. Fine form and substance. Tolerates low temperature well. Vigorous growth. Recommended April through October in the greenhouse, and August through October in the cloth house. 50 cuttings, \$5.00.

COVER GIRL

November 10

(Winkler) Light pink anemone with salmon pink cushion. Good color and form. Short, compact growth with good production. For cut flower and pot plant use. 50 cuttings, \$5.00.

NOBILITY

November 10

(Yoder) Intermediate light pink single. Very flat form. Medium to tall with free, easy growth. A quality single. Recommended May, June, October and November in the greenhouse, and August through October in cloth house. 50 cuttings, \$5.00.

NEW VARIETIES FOR 1954

PINK—Continued

CAROLE November 15
(Winkler) Light pink anemone with salmon pink cushion. Resembles Majorette. Definitely smoother color plus more substance. 50 cuttings, \$5.00.

POLKA November 20
(Yoder) Intermediate pink anemone. Essentially a pot plant; equally valuable as a spray or disbud. Beautiful form and color. Compact growth. Recommended October through June. 50 cuttings, \$5.00.

NUGANO November 20
(DePetrus) Intermediate pompon. Excellent growth and production. A high quality flower. One of the most important pink pompons for this season. 50 cuttings, \$5.00.

DARK PINK MAJORETTE November 20
(Yoder) Dark sport of Majorette. Lively, intense color. 50 cuttings, \$5.00.

ILLINI FORMAL November 23
(Univ. of Ill.) Intermediate rose pink pompon. Fine growth and production. Excellent substance. Flowers for Thanksgiving. Very novel form that should be popular. 50 cuttings, \$5.00.



PARADISE

New, and a most unusual warm coral red shade. Normal date October 20; fine shaded for August-September or for April thru June. This unusual arrangement and Portrait (p. 51) were by Brown's Flowers, Aurora, Ill. Art Brown uses Mums and Poms heavily in his shop. Says Art, "They are our best-lasting, most satisfactory cut flower. We find them in good demand thruout the year."

PINK CLOUD November 25
(Winkler) Light pink decorative. Greenish overcast until mature; very fine form and substance. 50 cuttings, \$5.00.

ARGYLE December 10
(De Petris) Small pink pompon. Fine, clean growth; hard flower plus very acceptable pink shade. An outstanding late pink pompon. 50 cuttings, \$5.00.

BRONZE

BUCKEYE October 8
(Yoder) Intermediate salmon bronze pompon. Dwarf, compact, very sturdy growth. Striking new color, well suited to the garden and Mother's Day pot plant program. 50 cuttings, \$5.00.

MOONMAID October 14
Intermediate salmon bronze pompon. A new and useful color with good growth and production. Late garden variety or outdoor cut flower. Recommended for spring and fall flowering. 50 cuttings, \$5.00.

TALISMAN October 20
(Yoder) Talisman bronze; intermediate single. Color holds exceptionally well. Recommended April through October in the greenhouse and August and September cloth house. 50 cuttings, \$5.00.

PARADISE October 20
(Yoder) Intermediate coral red single. Color holds well. Recommended April through mid-June in the greenhouse, mid-August through October in the cloth house. A tall variety of outstanding new color. 50 cuttings, \$5.00.

PALETTE October 20
(Yoder) Intermediate dark salmon single. Heavy petalage with good substance. Fine in spring and fall. A new pastel shade. 50 cuttings, \$5.00.

GAITY October 25
(Yoder) Intermediate coral bronze single. This variety in combination with Paradise and Prelude constitute a trio bred to widen color range, adding new and lively pastels, especially valuable in the spring. Good growth and production. An exciting new color. 50 cuttings, \$5.00.

HILARITY November 1
(Yoder) Intermediate golden bronze single. Small daisy of wide petal and very lively color. Tolerates a wide range of conditions. Recommended May through October. Growth habit lends itself to pot culture. 50 cuttings, \$5.00.

FLAME GLOW November 5
(Winkler) Intermediate golden orange single. Fine growth and production. 50 cuttings, \$5.00.

ORANGE BEAUREGARD November 5
(Yoder) Lively, light orange or golden bronze sport from Beauregard. Valuable in a continuous year 'round program. In the early cloth house or under high temperature conditions it is a deep golden yellow pompon. Growth habit and response is same as that of Beauregard. 50 cuttings, \$5.00.

RED KING November 13
(Poesch) Intermediate red single. Good growth and production; short, compact plant with compound spray. A good red pot plant variety. 50 cuttings, \$5.00.

CADET November 14
(Yoder) Intermediate red anemone. Short, compact, and free breaking. Approximate size of Gypsy. Recommended as a spray but useful as a disbud. Season is October through March, especially effective at Thanksgiving and Christmas. A pot plant variety. 50 cuttings, \$5.00.

ILLINI REDWOOD November 25
(Univ. of Ill.) Intermediate red pompon. Hard, durable, well formed flower. Fine red pompon for Thanksgiving. 50 cuttings, \$5.00.

For prices for more than 50 of a variety, see page 53.

Standards

Types are abbreviated as follows: Inc.—Incurved; Ref.—Reflexed. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

WHITE

Variety and Description	Normal Flowering Date	Price 50 Only
8-Week Varieties—Pinch July 1		
Silver Sheen. Med. Inc.	Oct. 20	\$3.00
White Chief. Med. Inc. Sport.....	Oct. 20	3.50
Christina. S. Inc. Pot plant.....	Oct. 23	3.50
9-Week Varieties—Pinch July 8		
Ambassador. Cream white. L. Semi-Inc.....	Oct. 25	3.25
Granite State. Pure white. S. Inc. Pot plant.....	Oct. 25	3.00
Albatross. Pure white. M. Inc.....	Nov. 1	3.25
Snow White. L. Inc.	Nov. 1	3.00
Wilson's White. M. Inc. Pot plant.....	Nov. 1	4.00
10-Week Varieties—Pinch July 22		
Betsy Ross. Ivory White. L. Inc.....	Nov. 5	3.00
Giant Betsy Ross. Sport of Betsy Ross. L. Inc.....	Nov. 5	3.25
Indianapolis White. M. Inc. Pot plant.....	Nov. 5	3.00
Richard Mandel. S. Inc. Pot plant.....	Nov. 5	3.25
Crystal Queen. Improved Jean Elizabeth. L. Semi-Inc.....	Nov. 10	4.50
Jean Elizabeth. Large Semi-Inc.	Nov. 10	3.25
Monument. Ivory White. M. Inc.....	Nov. 10	3.25
White Pockett. L. Inc.	Nov. 10	3.50
11-Week Varieties—Pinch July 29		
Sterling. White. L. Inc.	Nov. 15	3.50
Marketeer. M. Semi-Inc. Pot plant	Nov. 18	3.00
Indiana Market. M. Inc.	Nov. 20	3.50
Mefo. Ivory white, L. Inc.	Nov. 20	3.00
White Frick. White suffused pink. M. Inc. Pot plant.....	Nov. 20	3.25
12-Week Varieties—Pinch Aug. 5		
Chattanooga. L. Inc.	Nov. 25	3.00
December Glory. Ivory white. M. Inc.....	Dec. 1	3.25
Margaret Moeller. White. M. Inc. Pot plant.....	Dec. 3	3.00
13-Week Varieties—Pinch Aug. 12		
December White. M. Inc.	Dec. 5	3.25
White Mistletoe. Med. Inc.	Dec. 5	3.25
Snowline. Showy white flower. L. Inc.....	Dec. 10	3.50
Smith's White. Ivory white. M. Semi-Inc.....	Dec. 13	3.25

YELLOW

8-Week Varieties—Pinch July 1

Harvest Golden. Deep Gold. Med. Inc.....	Oct. 10	3.50
Buttercup (H). (New) L. Inc. Golden.....	Oct. 15	7.50
Celestra. Lemon yellow. S. Semi-Inc.	Oct. 15	3.25
Gold Lode. Golden yellow. M. Ref. Pot plant.....	Oct. 15	3.00
Butterball. M. Inc.	Oct. 20	3.50
Mrs. Kidder. Deep lemon yellow. M. Inc. Pot plant.....	Oct. 20	3.00
Blazing Gold. Deep gold. M. Semi-Inc. Pot plant.....	Oct. 23	3.00

Standards

YELLOW—Continued

Variety and Description	Normal Flowering Date	Price 50 Only
9-Week Varieties—Pinch July 8		
Smith's Superlative. Golden yellow. M. Semi-Inc. Pot plant.....	Oct. 25	\$3.25
Sunglow. Golden yellow. Med. Inc. Pot plant.....	Oct. 25	3.00
Yellow Ambassador. Light lemon yellow. Int. Semi-Inc.....	Oct. 25	3.25
Yellow Bergen. Med. Inc. Pot plant.....	Oct. 25	3.25
Golden Glory. Golden yellow. M. Inc.....	Nov. 1	3.25
Good News. Deep lemon yellow. M. Inc.....	Nov. 1	3.25
10-Week Varieties—Pinch July 22		
Dark Indianapolis Yellow. For pot plant use only. Int. Inc.....	Nov. 5	3.25
Imp. Indianapolis Yellow. Selection of Ind. Yellow. Int. Inc.....	Nov. 5	3.50
Indianapolis Yellow. Lemon yellow. M. Inc. Pot plant.....	Nov. 5	3.00
Jamboree. Golden Yellow. M. Inc.....	Nov. 10	3.50
Yellow Beauty. Golden yellow. S. Inc. Pot plant.....	Nov. 10	3.25
Yellow Monument. Light lemon yellow. Int. Inc.....	Nov. 10	3.25
Yellow Pockett. L. Inc.	Nov. 10	3.50
Yellow Queen. Sport of Orchid Queen. L. Semi-Inc.....	Nov. 10	3.25
Honey Dew. Lemon yellow. M. Inc. Pot plant.....	Nov. 12	3.25
11-Week Varieties—Pinch July 29		
Yellow Marketeer. Sport of Marketeer. Int. Semi-Inc. Pot plant.....	Nov. 18	4.50
Bonnaffon DeLuxe. Golden yellow. S. Inc. Pot plant.....	Nov. 20	3.00
Cream Mefo. Sport of Mefo. Large Inc.....	Nov. 20	3.25
Friendly Rival. Deep chrome yellow. M. Inc. Pot plant.....	Nov. 20	3.25
Purdue. Lemon yellow. M. Inc. Pot plant.....	Nov. 20	3.50
Yellow Mefo. Lemon yellow. L. Inc.....	Nov. 20	3.00
Harvester. Deep canary yellow. M. Inc.....	Nov. 23	3.00
Marie DePetris. Deep golden yellow. M. Inc. Pot plant.....	Nov. 23	3.25
12-Week Varieties—Pinch Aug. 5		
Dark Yellow Chattanooga (New). L. Inc.	Nov. 25	5.00
Golden Pearson. Light golden yellow. M. Inc.....	Nov. 25	3.00
Mrs. Calkins. Golden yellow. M. Semi-Inc.	Nov. 25	3.50
Sungold. Lemon yellow. M. Inc. Pot plant.....	Nov. 25	3.25
Yellow Chattanooga. L. Inc.	Nov. 25	3.00
Golden Mrs. Ross. Golden yellow. L. Inc.	Dec. 3	3.00
Yellow Moeller. Sport of Margaret Moeller. M. Inc. Pot plant.....	Dec. 3	3.50
13-Week Varieties—Pinch Aug. 12		
Chalice. M. Inc.	Dec. 5	4.00
Golden Mistletoe. Light golden yellow. M. Inc.....	Dec. 5	3.25
Dauntless. Golden yellow. S. Semi-Inc. Pot plant.....	Dec. 13	3.50
Meteore. Lemon yellow. M. Semi-Inc.	Dec. 13	3.25
Tobin's Yellow. Light lemon. M. Semi-Inc.	Dec. 13	3.25

PRICES FOR MORE THAN 50 OF A VARIETY ON ONE SHIPMENT

50 Only	100-250 Per 100	300-450 Per 100	500-950 Per 100	1000-2450 Per 100	2500-up Per 100
\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
6.25	12.00	11.50	11.00	10.50	10.00
7.50	14.25	13.50	12.75	12.00	11.25

Standards

Types are abbreviated as follows: Inc.—Incurved; Ref.—Reflexed. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

PINK		Normal Flowering Date	Price 50 Only
Variety and Description			
8-Week Varieties—Pinch July 1			
Pink Chief. Lavender. M. Inc.....		Oct. 15	\$3.00
Major Bowes. Deep lavender. M. Inc.....		Oct. 15	3.00
9-Week Varieties—Pinch July 8			
Sugar Plum. Hard pink mum. M. Inc.....		Nov. 1	3.50
10-Week Varieties—Pinch July 22			
Indianapolis Pink. Deep lavender. M. Inc. Pot plant.....		Nov. 5	3.00
J. W. Prince. Lavender. M. Inc.....		Nov. 5	3.25
Dark Orchid Queen. Deep pink. L. Semi-Inc.....		Nov. 10	3.25
Lavender Queen. Sport of Orchid Queen. L. Semi-Inc.....		Nov. 10	3.50
Orchid Queen. Orchid pink. L. Semi-Inc.....		Nov. 10	3.25
Pink Pockett. Lavender. L. Inc.....		Nov. 10	3.50
Queen of Pinks. Lavender. S. Inc. Pot plant.....		Nov. 10	3.00
11-Week Varieties—Pinch July 29			
Aristocrat. Deep lavender. L. Inc.....		Nov. 20	3.25
Helen Frick. Rose pink. M. Inc. Pot plant.....		Nov. 20	3.25
Rose Delight. Deep rose. M. Inc.....		Nov. 20	3.50
Edwin Seidewitz. Lavender. M. Inc.....		Nov. 23	3.25
Thanksgiving Pink. Deep pink. M. Ref.		Nov. 23	3.00
13-Week Varieties—Pinch Aug. 12			
Pink Mistletoe. Lavender. M. Inc.		Dec. 5	3.25

BRONZE AND RED

8-Week Varieties—Pinch July 1			
Amber Bright. Amber bronze. M. Inc.....		Oct. 15	3.00
Chopin (New). L. Inc.		Oct. 15	7.50
Mayford's Triumph. Dark amber. M. Inc.....		Oct. 15	3.50
9-Week Varieties—Pinch July 8			
Hilda Bergen. Dark reddish bronze. M. Inc. Pot plant.....		Oct. 25	3.25
Glitters. Deep reddish orange. M. Ref. Pot plant.....		Oct. 28	3.25
Red Glitters. Sport of Glitters. Int. Ref. Pot plant.....		Oct. 28	3.25
Apricot Queen. Orange-bronze. M. Inc. Pot plant.....		Nov. 1	3.25
Ivanhoe. Reddish bronze. S. Inc.		Nov. 1	3.25
Detroit News. Reddish bronze. M. Inc.		Nov. 1	3.25
Royal Bronze. Orange bronze. S. Semi-Inc. Pot plant.....		Nov. 1	4.50

**IMPORTANT: ABSOLUTELY NO CHANGES ON YOUR ORDER CAN BE ACCEPTED
WITHIN 30 DAYS OF DELIVERY DATE.**

Standards

Variety and Description	BRONZE AND RED—Continued	Normal Flowering Date	Price 50 Only
10-Week Varieties—Pinch July 22			
Dark Indianapolis Bronze. Sport of Ind. Bronze. M. Inc. Pot plant.....		Nov. 5	\$4.50
Indianapolis Bronze. Buff bronze. M. Inc. Pot plant.....		Nov. 5	3.00
Indianapolis Golden Bronze. Quilled. For pot plant use only. Semi-Inc.....		Nov. 5	4.00
Anaconda. Deep coppery red. L. Inc.....		Nov. 8	3.25
Bronze Orchid Queen. Apricot buff. L. Semi-Inc.....		Nov. 10	3.25
Mrs. Stahelin. Reddish bronze. M. Inc.....		Nov. 10	3.50
Oakdale. Buff bronze. M. Inc.....		Nov. 10	3.50
Garnet King. Dark red. M. Ref.....		Nov. 13	3.25
Mrs. Roy. Red. M. Inc.		Nov. 13	3.50
11-Week Varieties—Pinch July 29			
Bronze Frick. Light bronze. M. Inc.....		Nov. 20	3.25
12-Week Varieties—Pinch Aug. 5			
Gladys Pearson. Light buff bronze. M. Inc.....		Nov. 25	3.00
Oak Leaf (Bronze Pearson). M. Inc.....		Nov. 25	3.00
Muto's Crimson. Red. M. Semi-Inc. Pot plant.....		Dec. 1	3.50
13-Week Varieties—Pinch Aug. 12			
Bronze Mistletoe. Buff bronze. M. Inc.....		Dec. 5	3.25

Spider Varieties

Variety and Description	Normal Flowering Date	Price 50 Only
9-Week Varieties—Pinch July 8		
Dalwin. Light bronze	Oct. 25	\$4.50
Moribana. Yellow. Pot plant	Oct. 25	4.50
Nightingale. (New) Chartreuse center	Oct. 25	3.25
Gold Lace. Improved Yellow lace. Pot plant.....	Nov. 1	4.50
Bunbu. (New) Lavender	Nov. 1	3.25
Hooked Yellow Lace. Yellow lace with hooked petals. Pot plant.....	Nov. 1	4.50
Kay Tashima. White	Nov. 1	3.50
Mary Garden. Pink	Nov. 1	3.50
Mrs. R. A. Walker. Deep lavender.....	Nov. 1	3.50
Queen's Lace. White. Pot plant	Nov. 1	3.50
Yellow Lace. Yellow sport of Queen's Lace. Pot plant.....	Nov. 1	3.50
10-Week Varieties—Pinch July 22		
Gena Harwood. Buff bronze	Nov. 5	3.50
Mamoru. Buff bronze	Nov. 5	3.25
Nomaga. Bronze	Nov. 5	4.00
Rayonnante. Pink	Nov. 5	3.25
Sue Sally Jones. Deep lemon yellow. Pot plant.....	Nov. 5	3.50
Waikiki. Apricot bronze	Nov. 5	3.50
White Rayonnante. White	Nov. 5	3.25
Yellow Rayonnante. Yellow	Nov. 5	3.50
Peggy Hoover. Pink	Nov. 10	3.50
11-Week Varieties—Pinch July 29		
Lorraine. Yellow. Pot plant	Nov. 15	3.50



SINGLE



FORMAL POMPON



ANEMONE



DECORATIVE POMPON

NEW CLASSIFICATION!

You may have noticed the new system followed in the '54 Ball Mum Guide—especially on Pompons, singles, and Anemones, etc. To get away from that cumbersome "handle", we are grouping all of them under the term, "Spray Types"—as opposed to Standards, which have but **one** flower per stem.

SPRAY TYPES

Under the heading of Spray Types are the following:

- A. **Singles**—open centers.
- B. **Anemones**—with crested center. Shasta.
- C. **Button Pomps**—quite small, round, hard flowers. Pinocchio, Pixie.
- D. **Formal Pomps**—generally a harder, deeper flower of regular outline. Gold Coast, Encore.

- E. **Decorative Pomps**—irregular, less formal outline than Formal Pompon, and not quite so deep. Silversmith, Rubicon.

STANDARDS—as before, are the "big" Mums. One flower per stem. Types:

- A. **Incurved**—petals turn up and inward. Good News, the Indianapolis varieties.
- B. **Reflex**—petals turn out and down. Thanksgiving Pink is one of them.

Spray Types

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single; Anem.—Anemone. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

WHITE

Variety and Description

7-Week Varieties—Pinch June 24

	Normal Flowering Date	Price 50 Only
September Morn. White. M. Sgl.....	Oct. 1	\$3.50
White Wonder. M. Formal Pomp.....	Oct. 1	3.25
Chris. Columbus. M. Dec.....	Oct. 1	3.50
Avalanche. Snow white. L. Dec.....	Oct. 5	3.25
White Cloud. L. Dec.....	Oct. 5	3.50
Horizon. Pure white. M. Formal Pomp.....	Oct. 5	4.00
Marshmallow (New). M. Sgl.....	Oct. 5	5.00
Classic. Semi-formal Pomp. M.....	Oct. 10	3.50
Maestro. M. Formal Pomp. Dwarf, compact 18-inch growth.....	Oct. 10	3.50
Renown. Small Sgl.	Oct. 10	3.50
Silverplate. M. Dec.	Oct. 12	3.50

8-Week Varieties—Pinch July 1

California White Daisy. (Kimoto's White). M. Sgl.....	Oct. 15	3.50
Irene. S. Formal Pomp.....	Oct. 15	3.25
Norona. Button Pomp.	Oct. 15	4.00
Silver Ball. L. Formal Pomp.....	Oct. 15	3.00
Minong. S. Formal Pomp.....	Oct. 20	3.00
Pristine. Pure white. M. Formal Pomp.....	Oct. 20	3.50
Silvertone. (New). M. Sgl.....	Oct. 24	5.00

9-Week Varieties—Pinch July 8

Cotton Top. Pure white. S. Formal Pomp.....	Oct. 25	3.25
Keepsake. Cream white. M. Formal Pomp.....	Oct. 25	4.00
Pinocchio. Button Pomp.	Oct. 25	3.00
Popcorn. White. M. Formal Pomp.....	Oct. 25	3.25
Shooting Star. M. Sgl.....	Oct. 25	4.00
Songster. M. Formal Pomp.....	Oct. 25	3.50
White Popcorn. Cream white sport of Popcorn.....	Oct. 25	4.00
Arcadia. M. Formal Pomp.....	Oct. 28	3.25
Halo. Early White. M. Sgl.....	Nov. 1	3.50
Seagull. Cream white. M. Formal Pomp.....	Nov. 1	3.00
Silver Cloud (New). M. Sgl.....	Nov. 1	5.00
White Doty. Ivory White. L. Formal Pomp.....	Nov. 1	3.25

WHITE POPCORN

ILLINI SNOWDRIFT

SONGSTER



Spray Types

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single; Anem.—Anemone. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

WHITE—Continued

Variety and Description

10-Week Varieties—Pinch July 22

	Normal Flowering Date	Price 50 Only
Encore. Pure white. M. Formal Pomp.....	Nov. 5	\$3.25
Freedom (New). M. Sgl.....	Nov. 5	5.00
Kolowa. White, yellow center. M. Sgl.....	Nov. 5	3.50
Madonna. M. Formal Pomp.....	Nov. 5	4.00
White Anemone. L. Anemone.....	Nov. 5	3.50
White Mensa. Ivory white. L. Sgl.....	Nov. 5	3.25
Whitetop (New). M. Dec.....	Nov. 5	5.00
Moonglow. White. M. Formal Pomp.....	Nov. 8	3.50
Rev. Bushnell. Cream white. M. Formal Pomp.....	Nov. 8	3.50
Dynamo. M. Formal Pomp.....	Nov. 10	4.00
Illini Igloo. M. Formal Pomp.....	Nov. 10	4.50
Little America. Pure white. M. Anemone. Pot plant.....	Nov. 10	3.00
Nagana. (Calif. White Mensa). M. Sgl.....	Nov. 10	3.50
Pacesetter (New). M. Sgl.....	Nov. 10	5.00
Shasta. L. Anemone	Nov. 10	3.00
Vesper. M. Formal Pomp.....	Nov. 10	3.25
Illini Snowdrift. White. M. Dec. Pot plant.....	Nov. 12	3.50
Matchless. White. M. Formal Pomp.....	Nov. 12	3.25

11-Week Varieties—Pinch July 29

Eskimo. White, yellow center. M. Sgl.....	Nov. 15	4.00
Lakme. Green eye. S. Formal Pomp.....	Nov. 15	3.50
Sculpture. Ivory white. L. Sgl.....	Nov. 15	4.00
Snowflurry. Button Pomp.	Nov. 15	3.50
White Freida. Yellow cushion. L. Anemone.....	Nov. 15	3.00
White Norma. White suffused with pink. L. Anemone.....	Nov. 15	3.50
Highbrow. Ivory white. M. Dec.....	Nov. 20	3.50
Long Island Beauty. White, yellow cushion. L. Anemone. Pot plant.....	Nov. 20	3.00
Nevada. White, green cushion. M. Anemone.....	Nov. 20	3.25
Priscilla. Ivory. M. Formal Pomp.....	Nov. 20	3.00
Seafoam. M. Formal Pomp.....	Nov. 20	3.25
Crystal Beauty. Pure white. M. Formal Pomp.....	Nov. 23	3.50
Illini Bountiful. White. M. Dec.....	Nov. 23	3.50
Paramount. M. Formal Pomp.....	Nov. 23	3.50
Belray. L. Formal Pomp.....	Nov. 24	3.50

PRICES FOR MORE THAN 50 OF A VARIETY ON ONE SHIPMENT

50 Only	100-250 Per 100	300-450 Per 100	500-950 Per 100	1000-2450 Per 100	2500-up Per 100
\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
6.25	12.00	11.50	11.00	10.50	10.00
7.50	14.25	13.50	12.75	12.00	11.25

Spray Types

WHITE—Continued

Variety and Description	Normal Flowering Date	Price 50 Only
12-Week Varieties—Pinch Aug. 12		
White Lady. Sport of Beautiful Lady. L. Anemone. Pot plant.....	Nov. 25	\$4.50
White Yuletide. Short. M. Formal Pomp.....	Nov. 25	3.00
White Valencia. Sport of Valencia. L. Sgl.....	Nov. 28	3.50
Cordova. Cream white. M. Dec.....	Nov. 30	3.25
Fortune. White. M. Formal Pomp.....	Dec. 1	3.50
Monarch. Ivory white. M. Dec.....	Dec. 1	4.00
13-Week Varieties—Pinch Aug. 12		
Acclaim. M. Formal Pomp.....	Dec. 5	4.00
Cameo. Ivory white. Med. Dec.....	Dec. 5	3.00
Cotillion. S. Semi-formal Pomp.....	Dec. 5	4.00
Spangles. M. Formal Pomp.....	Dec. 5	3.50
Swan. L. Anemone	Dec. 5	3.50
White Enchantress (New). L. Anemone.....	Dec. 5	5.00
Carrara. M. Dec.....	Dec. 8	4.50
Snowdrop. Button Pomp.	Dec. 8	4.00
Illini Starlet (New). M. Anemone.....	Dec. 10	5.00
Snow Queen. M. Formal Pomp.....	Dec. 10	4.00
Imp. White Supreme. L. Anemone.....	Dec. 10	3.50
Yukon. M. Sgl.	Dec. 10	3.00
14-Week Varieties—Pinch Aug. 26		
Snowcrest. Green eye. M. Formal Pomp.....	Dec. 15	3.25
Garza. M. Anem.	Dec. 15	3.25
Satellite. Ivory white. M. Formal Pomp.....	Dec. 15	4.00
Silversmith. Pure white. M. Dec.....	Dec. 15	3.25
Snowcap. White. L. Formal Pomp.....	Dec. 15	3.50
Trenton (New). M. Formal Pomp.....	Dec. 15	5.00
Heirloom. M. Dec.	Dec. 20	3.50
15-Week Varieties—Pinch Sept. 2		
Muto's White (New). L. Formal Pomp.....	Dec. 25	3.00
Revelation. M. Dec.	Dec. 25	3.00
Snow. Ivory white. M. Formal Pomp.....	Dec. 25	3.00
Talmeda (New). M. Formal Pomp.....	Jan. 5	5.00
Illini Snowbound. M. Dec.....	Jan. 5	4.50

GOLD COAST



STARBRIGHT



GOLDEN CHORD



Spray Types

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single; Anem.—Anemone. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

YELLOW

Variety and Description

Normal Flowering Date

Price 50 Only

7-Week Varieties—Pinch June 24

Yel. Chris. Columbus. Sport of Chris. Columbus. M. Dec.....	Oct. 1	\$3.50
Moonlight. M. Dec.	Oct. 1	4.50
Honeycomb. S. Formal Pomp.....	Oct. 1	3.25
Polaris. M. Sgl.....	Oct. 5	3.50
Chas. Nye. M. Dec.....	Oct. 5	3.25
Garland. M. Sgl.	Oct. 5	4.00
Yellow Spoon. M. Spoon.....	Oct. 5	3.50
Bright Forecast. Button Pomp.....	Oct. 10	3.50
Goldrush. Sm. Sgl.	Oct. 10	3.50
Lee Powell. L. Dec.....	Oct. 10	4.50
Treasure. S. Formal Pomp.....	Oct. 10	4.00
Lemonade. Ivory yellow. M. Dec.....	Oct. 12	3.50
Sweepstake. S. Formal Pomp.....	Oct. 12	3.50

8-Week Varieties—Pinch July 1

Arlora (New). M. Dec.....	Oct. 15	5.00
Yellow Irene. Light lemon yellow. S. Formal Pomp.....	Oct. 15	3.25
Creampuff (New). M. Sgl.....	Oct. 20	5.00
Moondrift. Ivory yellow. M. Sgl.....	Oct. 20	4.50
Rodell Improved. Lemon yellow. S. Formal Pomp.....	Oct. 20	3.00

9-Week Varieties—Pinch July 8

Cream Dot. M. Formal Pomp.....	Oct. 25	3.00
Gold Coast. Lemon yellow. M. Formal Pomp.....	Oct. 25	3.00
Golden Herald. Golden yellow. L. Dec.....	Oct. 25	3.00
Ordalia (New). L. Dec.....	Oct. 25	5.00
Red Dot. Yellow, red center. M. Formal Pomp.....	Oct. 25	3.00
Starlight (New). L. Sgl.....	Oct. 25	5.00
Yellow Dot. Bronze center. M. Formal Pomp.....	Oct. 25	3.00
Yellow Firebird. Bright lemon. M. Dec.....	Oct. 25	3.25
Aztec (New). M. Sgl.....	Oct. 28	5.00
Sunup. Lemon yellow. Button Pomp.....	Oct. 28	4.00
Yellow Arcadia. Pernet yellow. M. Formal Pomp.....	Oct. 28	3.25
Sauterne (New). M. Sgl.....	Oct. 30	5.00
Gondola (New). M. Sgl.....	Oct. 30	5.00
Calif. Yel. Daisy. Bright lemon. M. Sgl.....	Nov. 1	3.50
Mary Gold. Deep Lemon. M. Formal Pomp.....	Nov. 1	3.00
Mary Hall. Lemon yellow. M. Formal Pomp.....	Nov. 1	3.00
Schneeburg's Daisy. Golden Yellow sport of Yellow Daisy. Med. Sgl.....	Nov. 1	3.50
Starbright. Golden yellow. L. Sgl.....	Nov. 1	3.50
Yellow Cassandra. Sport. M. Formal Pomp.....	Nov. 1	3.50
Yellow Daisy. Golden yellow. M. Sgl.....	Nov. 1	3.25
Yellow Doty. Buff yellow. L. Formal Pomp.....	Nov. 1	3.25
Yellow Halo. Sport of Halo. M. Sgl.....	Nov. 1	4.50
Yellow Sea Gull. Light lemon yellow. Tall. M. Formal Pomp.....	Nov. 1	3.00
Sunray. Light lemon yellow. M. Sgl.....	Nov. 3	3.00
Honeymoon (New). L. Sgl.....	Nov. 4	5.00

Spray Types

YELLOW—Continued

Variety and Description

Normal
Flowering
Date

Price
50 Only

10-Week Varieties—Pinch July 22

Brigadoon. M. Sgl.	Nov. 5	\$4.00
Barcarole. Golden yellow. M. Formal Pomp.....	Nov. 5	3.25
Constellation. Yellow. M. Dec.....	Nov. 5	3.00
Crescendo. Tall yellow. L. Formal Pomp.....	Nov. 5	3.50
Golden Mensa. Sport of Mensa. L. Sgl.....	Nov. 5	3.25
Nuggets. Light lemon yellow. S. Formal Pomp.....	Nov. 5	3.00
Pixie. Deep golden yellow. Button Pomp.....	Nov. 5	3.25
Lila Lily (New). M. Anem.....	Nov. 10	3.50
Mason's Yellow. L. Sgl.....	Nov. 10	3.50
Yellow Beauty (New). L. Formal Pomp.....	Nov. 10	3.25
Yellow Nagona. (Calif. Yellow Mensa) Med. Sgl.....	Nov. 10	3.50
Yellow Shasta. Light lemon sport of Shasta. L. Anem.....	Nov. 10	3.00
Illini Goldcup. Buttercup yellow. L. Formal Pomp.....	Nov. 10	3.50

11-Week Varieties—Pinch July 29

Forty-Niner. Yellow. M. Formal Pomp.....	Nov. 15	3.25
Golden Chord. Golden yellow. M. Formal Pomp.....	Nov. 15	3.25
Princeton. Orange-yellow. M. Dec.....	Nov. 15	3.25
Thorobred. L. Sgl.	Nov. 15	4.00
Yellow Fellow. Deep lemon yellow. M. Dec.....	Nov. 15	3.25
Tacoma. L. Formal Pomp.....	Nov. 15	4.50
Susanne Miller. Buff yellow. L. Anem.....	Nov. 15	3.50
Illini Brave. Lemon yellow. S. Formal Pomp.....	Nov. 16	3.50
Bojangles. Yellow daisy. M. Sgl.....	Nov. 20	3.50
Illini Sunspot. Bright lemon. L. Formal Pomp.....	Nov. 20	4.50
Klondike. Orange yellow. M. Formal Pomp.....	Nov. 20	3.50
Lollipop. Lemon yellow. M. Formal Pomp.....	Nov. 20	3.50
Pippin. Deep lemon. M. Formal Pomp.....	Nov. 20	4.00
Yellow Highbrow. Sport of Highbrow. M. Dec.....	Nov. 20	4.50
Yellow L. I. Beauty. L. Anem.....	Nov. 20	3.50
Yellow Nevada. Med. Anem.....	Nov. 20	3.25
Yellow Paramount (New). M. Formal Pomp.....	Nov. 23	5.00
Yellow Rolinda (New). M. Formal Anem.....	Nov. 23	3.00
Champagne. Yellow. M. Sgl.....	Nov. 25	3.50
Goldenrod. M. Formal Pomp.....	Nov. 25	4.00
Goldsmith. Golden Yellow. L. Dec.....	Nov. 25	3.25
Highlander. M. Formal Dec.....	Nov. 25	4.00

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\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
6.25	12.00	11.50	11.00	10.50	10.00
7.50	14.25	13.50	12.75	12.00	11.25

Spray Types

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single; Anem.—Anemone. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

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Variety and Description	YELLOW	Normal Flowering Date	Price 50 Only
11-Week Varieties—Continued			
Illini Gold. Deep golden yellow. M. Formal Pomp.....		Nov. 25	\$3.25
Sunnyside. Golden yellow. M. Formal Pomp.....		Nov. 25	3.00
Yellow Priscilla. Lemon. M. Dec.....		Nov. 25	3.50
Golden Jane. Golden yellow. L. Sgl.....		Nov. 28	3.25
Yellow Valencia. Sport of Valencia. L. Sgl.....		Nov. 28	3.25
Yellow Cordova. Lemon yellow. M. Formal Pomp.....		Nov. 30	3.25
Nosegay. Yellow. S. Formal Pomp.....		Dec. 1	4.00
Omega. Lemon yellow. M. Formal Pomp.....		Dec. 1	3.00
Yellow Fortune (New). M. Formal Pomp.....		Dec. 1	5.00
Yellow Galaxy. Sport of Galaxy. M. Sgl.....		Dec. 1	4.50
13-Week Varieties—Pinch Aug. 12			
Golden Harvest. Deep gold. S. Formal Pomp.....		Dec. 5	3.50
Brandywine. Orange yellow. M. Dec.....		Dec. 5	4.00
Cinderella. Yellow. M. Sgl.....		Dec. 5	3.50
Goldtone. Lemon. M. Sgl.....		Dec. 5	3.50
Jack-Pot. Golden yellow. L. Dec.....		Dec. 5	4.00
Symmetry. M. Formal Pomp.....		Dec. 5	4.00
Yellow Acclaim (New). L. Formal Pomp.....		Dec. 5	5.00
Yellow Cameo. Deep lemon yellow. M. Dec.....		Dec. 5	3.00
Yellow Spangles. Sport of Spangles. M. Formal Pomp.....		Dec. 5	4.50
Yellow Swan. Sport of Swan. L. Anem.....		Dec. 5	3.50
Imp. Yellow Supreme. Buff yellow. L. Anem.....		Dec. 10	3.50
Challenge. Yellow. M. Sgl.....		Dec. 12	3.50
Corsair. Lemon. L. Formal Pomp.....		Dec. 12	4.00
14-Week Varieties—Pinch Aug. 26			
Cream Snowcrest. Sport of Snowcrest. S. Formal Pomp.....		Dec. 15	4.50
Yellow Riviera. Golden yellow sport of Riviera. M. Dec.....		Dec. 15	3.50
Yellow Snowcap (New). L. Formal Pomp.....		Dec. 15	5.00
Yellow Snowcrest. Sport of Snowcrest. S. Formal Pomp.....		Dec. 15	4.00
December Gold. Deep golden yellow. M. Dec.....		Dec. 15	3.25
Sequin. Bottom Pomp.		Dec. 15	3.50
Shamrock. L. Dec.		Dec. 15	3.50
Yellow Garza. Sport of Garza. M. Anem.....		Dec. 15	3.25
Gold Seal. M. Sgl.....		Dec. 20	4.50
Revelry. Lemon. M. Dec.		Dec. 20	4.00
Sunkist. M. Sgl.		Dec. 20	3.50
Sunrise. Yellow. M. Formal Pomp.....		Dec. 20	4.00
Vibrant. Deep lemon yellow. M. Dec.....		Dec. 20	3.00
Golden Anniversary. Yellow. S. Formal Pomp.....		Dec. 24	3.50
Siren. Lemon yellow. M. Dec.....		Dec. 25	3.50
Yellow Revelation. Lemon sport of Revelation. M. Formal Pomp.....		Dec. 25	3.00
Yellow Snow. Deep lemon yellow. M. Formal Pomp.....		Dec. 25	3.00
Yuleflame. Yellow. L. Dec.....		Dec. 25	3.50
Illini Yellow Snowbound. Light lemon sport of Illini Snowbound. M. Dec.....		Jan. 5	4.50

**IMPORTANT: ABSOLUTELY NO CHANGES ON YOUR ORDER CAN BE ACCEPTED
WITHIN 30 DAYS OF DELIVERY DATE.**

Spray Types

PINK

Variety and Description

Normal
Flowering
Date

Price
50 Only

7-Week Varieties—Pinch June 24

Early Wonder. Lavender. M. Formal Pomp.....	Oct. 1	\$3.25
Spellbound. Lavender-pink. M. Dec.	Oct. 1	3.25
Petrisian Mauve (New). M. Formal Pomp.....	Oct. 5	7.50
Petrisian Pink (New). M. Formal Pomp.....	Oct. 5	7.50
Petrisian Rose (New). M. Formal Pomp.....	Oct. 5	7.50
Argonne. Amaranth. M. Formal Pomp.....	Oct. 10	3.50
Brigadier. Salmon rose. M. Dec.	Oct. 10	4.50
Courtier. Lavender pink. M. Dec.....	Oct. 10	4.00
Dream Girl. Light lavender. M. Formal Pomp.....	Oct. 10	3.50
Joybringer. Salmon rose. M. Formal Pomp.....	Oct. 10	3.50
Lassie. Dark pink. M. Dec.....	Oct. 10	4.00
Orchid Spoon. M. Spoon	Oct. 10	3.50
Ponca. Dark lavender. S. Dec.....	Oct. 10	3.50
Serenade. Magenta pink. M. Sgl.....	Oct. 10	3.50
Sweetheart. Lavender pink. M. Sgl.....	Oct. 10	3.50
Adagio. Coppery rose. M. Formal Pomp. Tall.....	Oct. 12	3.50
Allegro. Shrimp pink. S. Dec.	Oct. 12	3.25
Lavender Lady. Light lavender. M. Dec.....	Oct. 12	3.50
Masquerade. Lavender rose. S. Formal Pomp.....	Oct. 12	3.50
Ronnie. Dark lavender. S. Formal Pomp.....	Oct. 12	3.50
Salute. Deep pink. S. Sgl.	Oct. 12	3.50
Sonnet (New). M. Formal Pomp.....	Oct. 14	5.00
Betty (New). M. Dec.	Oct. 14	3.50

8-Week Varieties—Pinch July 1

Citation (New). M. Formal Pomp	Oct. 15	5.00
Dark Jewell. Deep lavender. S. Formal Pomp.....	Oct. 15	3.25
Elizabeth Hood. Lavender. M. Formal Pomp.....	Oct. 15	4.50
Enterprise. Amaranth. M. Formal Pomp.....	Oct. 15	4.50
Fairyland (New). M. Dec.	Oct. 15	5.00
Jewell. Lavender. S. Formal Pomp.....	Oct. 15	3.25
Mayfair (New). M. Sgl.	Oct. 15	5.00
Jester (New). M. Sgl.	Oct. 15	5.00
Carolyn Yosick. Lavender. M. Formal Pomp.....	Oct. 20	3.00
Mirth (New). M. Sgl.	Oct. 20	5.00
Capt. Cook. Deep rose pink. M. Formal Pomp.....	Oct. 23	3.00
Pink Sprite. Light orchid. S. Formal Pomp.....	Oct. 23	3.50
Mary McArthur. Pink, shaded bronze. S. Formal Pomp.....	Oct. 23	3.50
Prelude (New). M. Sgl.	Oct. 24	5.00

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\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
6.25	12.00	11.50	11.00	10.50	10.00
7.50	14.25	13.50	12.75	12.00	11.25

Spray Types

Types are abbreviated as follows: Inc.—Incurved; Ref.—Reflexed. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

PINK—Continued

Variety and Description	Normal Flowering Date	Price 50 Only
9-Week Varieties—Pinch July 8		
Betty Rose. Lavender. L. Anem.	Oct. 25	\$3.50
Edith Roberts. Light orchid pink. S. Formal Pomp.....	Oct. 25	3.50
Jessie. Light lavender. M. Formal Pomp.....	Oct. 25	3.00
October Pink. Light lavender. M. Sgl.	Oct. 25	3.25
Pink Dot. Light pink. M. Formal Pomp.....	Oct. 25	3.00
Pinkette (New). M. Formal Pomp.....	Oct. 25	5.00
Reward. Deep pink. M. Sgl.	Oct. 25	3.50
Vogue (New). L. Sgl.	Oct. 25	5.00
Arbutus. Shrimp pink. M. Formal Pomp.....	Nov. 1	4.50
Ballerina. Pink. M. Sgl.	Nov. 1	3.50
Bluechip (New). M. Dec.	Nov. 1	5.00
Lillian Doty. Light lavender. L. Formal Pomp.....	Nov. 1	3.25
Pink California Daisy. M. Sgl.	Nov. 1	3.50
Portrait (New). L. Dec.	Nov. 1	5.00
Rainbow. Coral pink. M. Sgl.	Nov. 1	4.50
W. H. Buckingham (Pk. Calif. Daisy). Rose. M. Sgl.....	Nov. 1	3.50
Lotus (New). M. Formal Pomp.....	Nov. 3	5.00
Tempo (New). M. Dec.	Nov. 3	5.00

10-Week Varieties—Pinch July 22

Dreamboat. Lavender Pink. M. Formal Pomp.....	Nov. 5	3.25
Dark Bulkeley. Dark rose pink. M. Formal Pomp.....	Nov. 8	3.50
Cover Girl (New). M. Anem.	Nov. 10	5.00
Dark Linda Lou. Dark lavender sport of Linda Lou. M. Anem.....	Nov. 10	3.00
Linda Lou. Pink. Yellow cushion. M. Anem.....	Nov. 10	3.00
Miss Clarinda. Light lavender. M. Formal Pomp.....	Nov. 10	4.00
Nobility (New). M. Sgl.	Nov. 10	5.00
Pandora. Luminous pink. L. Dec.....	Nov. 10	4.00
Pennant (New). M. Dec.	Nov. 10	5.00
Soprano. Pink. L. Sgl.	Nov. 10	3.50
Thyra. Lavender. M. Formal Pomp. Pot plant.....	Nov. 10	3.00
Tuxedo. Pink. L. Anem.	Nov. 10	3.50
Masterpiece. Tourmaline pink. M. Formal Pomp. Pot plant.....	Nov. 12	3.00
Memorial. Lavender. M. Anem.	Nov. 12	4.00
Rose Masterpiece. Rose pink sport of Masterpiece. M. Formal Pomp.....	Nov. 12	3.25
Salmon Masterpiece. Salmon pink sport of Masterpiece. M. Formal Pomp....	Nov. 12	3.25
Taffeta. Deep pink. M. Dec.	Nov. 12	3.50

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WITHIN 30 DAYS OF DELIVERY DATE.**

Spray Types

PINK—Continued

Variety and Description	Normal Flowering Date	Price 50 Only
11-Week Varieties—Pinch July 29		
Brocade. Shell pink. M. Sgl.	Nov. 15	\$3.00
Carole (New). M. Anem.	Nov. 15	5.00
Dark Norma. Deep lavender. L. Anem.	Nov. 15	3.50
Freida. Light lavender. L. Anem.	Nov. 15	3.00
Orchid Beauty. Orchid, golden cushion. M. Anem.	Nov. 15	3.25
Almega. Lavender pink. L. Formal Pomp.	Nov. 20	4.50
Dark L. I. Beauty. Imp. Pink L. I. Beauty. L. Anem.	Nov. 20	4.50
Evening Star. Dark lavender. M. Anem.	Nov. 20	4.00
Grand Slam. Silvery shell pink. L. Sgl.	Nov. 20	4.00
Dk. Pk. Majorette (New). M. Anem.	Nov. 20	5.00
Majorette. Pink. M. Anem. Pot plant.	Nov. 20	3.50
Pink Long Island Beauty. Pink sport of L. I. Beauty. L. Anem.	Nov. 20	3.50
Pinky. Pink. M. Dec.	Nov. 20	3.50
Polka (New). M. Anem.	Nov. 20	5.00
Nugano (New). M. Formal Pomp.	Nov. 20	5.00
Vivacious Lady. Spoon type novelty. M.	Nov. 23	4.00
Minuet. Mauve to rose pink. M. Formal Pomp.	Nov. 23	3.25
Illini Formal (New). M. Formal Pomp.	Nov. 23	5.00
12-Week Varieties—Pinch Aug. 12		
Beautiful Lady. Lavender. L. Anem. Pot plant.	Nov. 25	3.00
Hasegawa Pink. Lavender. M. Sgl.	Nov. 25	3.50
Pink Cloud (New). M. Dec.	Nov. 25	5.00
Princess. S. Formal Pomp.	Nov. 25	4.00
Dark Valencia. Deep pink. L. Sgl.	Nov. 28	3.25
Dubonnet Valencia. Deep orchid sport of Valencia. L. Sgl.	Nov. 28	4.50
Orchid Valencia. Orchid sport of Valencia. L. Sgl.	Nov. 28	4.00
Salmon Valencia. Salmon sport of Valencia. L. Sgl.	Nov. 28	4.00
Valencia. Orchid pink. L. Sgl.	Nov. 28	3.25
Heritage. Dark pink. M. Formal Pomp.	Dec. 1	4.00
13-Week Varieties—Pinch Aug. 12		
Dark Enchantress. Deep pink sport of Enchantress. L. Anem.	Dec. 5	3.50
Enchantress. Deep pink. L. Anem.	Dec. 5	3.25
Argyle (New). S. Formal Pomp.	Dec. 10	5.00
Debutante. Large pink single.	Dec. 10	3.50
Imp. Dark Supreme. Sport of Dk. Pk. Supreme. L. Anem.	Dec. 10	3.50
Light Pink Minstrel. Sport of Minstrel. M. Formal Pomp.	Dec. 13	4.50
Minstrel. Lavender pink. M. Formal Pomp.	Dec. 13	3.50
14-Week Varieties—Pinch Aug. 26		
Coronet. Dark pink. M. Sgl.	Dec. 15	3.50
Dark Riviera. Deep lavender sport of Riviera. M. Dec.	Dec. 15	3.00
Riviera. Luminous pink. M. Dec.	Dec. 15	3.00
Serrated Riviera. Sport of Riviera. M. Dec.	Dec. 15	4.50
Defiance. True orchid pink. M. Dec.	Dec. 20	3.50
Medallion. Pink. M. Formal Pomp.	Dec. 20	3.50
Pink Treasure Island. Light lavender. M. Dec.	Dec. 20	3.00
Rosalind. Rose pink. M. Sgl.	Dec. 20	3.00
Rose Medallion. Sport of Medallion. M. Formal Pomp.	Dec. 20	4.50

Spray Types

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single; Anem.—Anemone. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

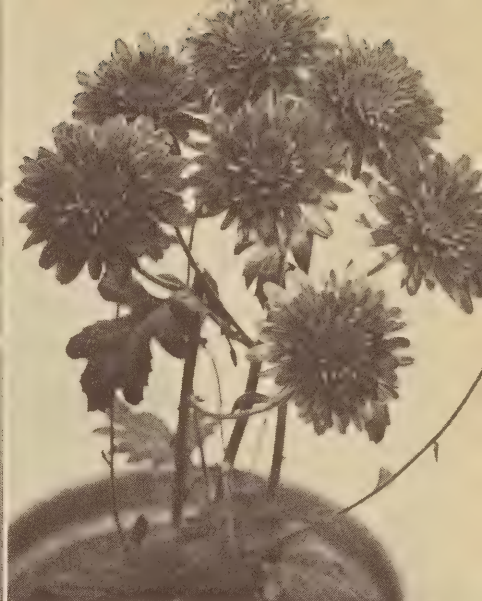
Variety and Description	BRONZE AND RED	Normal Flowering Date	Price 50 Only
7-Week Varieties—Pinch June 24			
Bonfire. Red Pompon		Oct. 1	\$3.50
Marionette. Rust red. S. Formal Pomp.....		Oct. 1	3.50
Mogul. Raspberry bronze. S. Dec.		Oct. 1	4.50
W. P. Snyder. Coral bronze. M. Dec.		Oct. 1	3.50
Avalon. Light bronze. S. Formal Pomp.....		Oct. 5	4.50
Firecracker. Mahogany bronze. M. Dec.....		Oct. 5	4.00
Huntsman. Reddish bronze. M. Dec.....		Oct. 5	3.50
Mona. Rust bronze. S. Pomp		Oct. 5	3.50
Buckeye (New). M. Formal Pomp.....		Oct. 8	5.00
Panorama. Orange bronze. S. Formal Pomp.....		Oct. 8	4.50
Bamboo. Buff bronze. S. Sgl.		Oct. 10	3.50
Blueblood. Deep amaranth. M. Dec.....		Oct. 10	4.00
Calico. Coral bronze. S. Sgl.		Oct. 10	3.50
Caravan. Salmon bronze. M. Dec.....		Oct. 10	4.00
Carmine Queen. Carmine red. S. Formal Pomp.....		Oct. 10	3.50
Carnival. Burnt orange. S. Formal Pomp.....		Oct. 10	3.50
Fireside. Burnt orange and salmon. M. Dec.....		Oct. 10	3.50
Red Velvet. Velvety crimson. M. Dec.		Oct. 10	4.50
Admiral. Crimson. M. Dec.		Oct. 12	4.00
Carmelita. Orange apricot. M. Dec.		Oct. 12	3.50
Mrs. Du Pont. Coral buff. L. Dec.....		Oct. 12	3.50
Nocturne. Crimson. S. Formal Pomp.....		Oct. 12	3.50
Nokomis. Bronze. M. Dec.		Oct. 12	3.50
Nytoda. Apricot buff. M. Sgl.		Oct. 12	4.50
Witchery. Golden bronze. M. Dec.....		Oct. 12	3.50
Moonmaid (New). M. Formal Pomp.....		Oct. 14	5.00
8-Week Varieties—Pinch July 1			
Cocktail. Salmon orange. M. Formal Pomp.....		Oct. 15	4.00
Detroit. Reddish bronze. S. Formal Pomp.....		Oct. 15	3.50
Rajah. Scarlet red. M. Sgl.		Oct. 15	4.00
Red Glow. Crimson-red. M. Dec.		Oct. 15	3.50
Robinhue. Red. M. Dec.		Oct. 15	3.50
James Stewart. Apricot Gold. S. Formal Pomp.....		Oct. 15	3.50
Adelaide. Dark reddish bronze. S. Formal Pomp.....		Oct. 20	3.00
Jemima. Dark reddish bronze. L. Formal Pomp.....		Oct. 20	3.00
Talisman (New). M. Sgl.		Oct. 20	5.00
Paradise (New). M. Sgl.		Oct. 20	5.00
Palette (New). M. Sgl.		Oct. 20	5.00
Bronze Mary McArthur. Sport of Mary McArthur. S. Formal Pomp.....		Oct. 23	3.50
9-Week Varieties—Pinch July 8			
Bonton. Bronze. M. Formal Pomp.....		Oct. 25	3.25
Bronze Dot. Sport of Pink Dot. M. Formal Pomp.....		Oct. 25	3.00
Buckskin. Tawny bronze. M. Sgl.		Oct. 25	3.50
Firebird. Dark reddish bronze. M. Dec.		Oct. 25	3.25
Gaiety (New). M. Sgl.		Oct. 25	5.00
October Bronze. Rosewood. M. Sgl.		Oct. 28	3.25



BRONZE GOLDSMITH



RUBICON



PARAGON

Spray Types

BRONZE AND RED—9-Week Varieties Continued

Variety and Description	Normal Flowering Date	Price 50 Only
Firefly. Orange red. M. Formal Pomp.....	Nov. 1	\$3.50
Bronze Daisy. Bronze sport of Yel. Daisy. M. Sgl.....	Nov. 1	3.25
Buccaneer. Orange apricot. M. Sgl.	Nov. 1	4.00
Hilarity (New). M. Sgl.	Nov. 1	5.00
Imp. Bronze Daisy. (Katoka Red) Sport of Br. Daisy. M. Sgl.....	Nov. 1	3.50
Imp. Red Daisy. (Adachi Red) Sport of Red Daisy. M. Sgl.....	Nov. 1	3.50
Red Seneca. Red Sport of Seneca. M. Dec.....	Nov. 1	3.50
Navaho. Deep crimson. M. Formal Pomp.....	Nov. 1	3.25
Seneca. Orange red. M. Dec.	Nov. 1	3.25
Red Daisy. Deep red. M. Sgl.	Nov. 1	3.25
Bronze Buckingham. Light orange bronze. M. Sgl.....	Nov. 1	3.50

10-Week Varieties—Pinch July 22

Comanche. Orange bronze. M. Formal Pomp.....	Nov. 5	3.50
Beauregard. Reddish orange. M. Formal Pomp.....	Nov. 5	3.50
Bittersweet. Bittersweet red. M. Sgl.	Nov. 5	3.25
Butterscotch. Golden bronze. M. Formal Pomp.....	Nov. 5	3.50
Cassandra. Orange bronze. M. Formal Pomp.....	Nov. 5	3.25
Flame Glow (New). M. Sgl.	Nov. 5	5.00
Magician. Bronze. L. Formal Pomp.....	Nov. 5	3.50
Orange Beauregard (New). M. Formal Pomp.....	Nov. 5	5.00
Red Rust. Reddish bronze. M. Dec.	Nov. 5	3.25
Rubicon. Bronze red. M. Dec.	Nov. 5	3.25
Gypsy. Light reddish bronze. S. Anem. Pot plant.....	Nov. 8	3.00
Bronze Linda Lou. Rosewood sport of Linda Lou. M. Anem.....	Nov. 10	3.50
Bronze Thyra. Rosewood sport of Thyra. M. Formal Pomp.....	Nov. 10	3.50
Bronze Tuxedo. Buff. L. Anem.	Nov. 10	3.50
Chanticleer. Reddish bronze. L. Formal Pomp.....	Nov. 10	3.50
Chevron. Orange red. M. Dec.	Nov. 10	3.50
Copperhead. Coppery bronze. L. Dec. Pot plant.....	Nov. 10	3.50
Europa. Cardinal red. L. Sgl.	Nov. 10	3.50

Spray Types

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single; Anem.—Anemone. Size of flower is indicated by S—Small; M—Medium; L—Large. Pinching and flowering dates given here are for normal flowering without shading or lights.

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BRONZE AND RED—10-Week Varieties—Continued

Variety and Description	Normal Flowering Date	Price 50 Only
Illini Burma. Light bronze. L. Formal Pomp.....	Nov. 10	\$4.00
Mason's Bronze. Burnt orange. L. Sgl.	Nov. 10	3.50
Mason's Red. Scarlet. L. Sgl.	Nov. 10	3.50
Samovar. Reddish bronze. M. Formal Pomp.....	Nov. 10	3.50
Sylvanna. Reddish orange. M. Sgl.	Nov. 10	3.25
The Titan. Scarlet crimson. L. Anem.	Nov. 10	3.25
Gold Braid. Yellow, bronze-red center. M. Formal Pomp.....	Nov. 12	4.00
Bronze Masterpiece. Rosewood bronze. M. Formal Pomp. Pot plant.....	Nov. 12	3.00
Dark Bronze Masterpiece. Sport. M. Formal Pomp. Pot plant.....	Nov. 12	3.25
Illini Rye. Straw color. M. Formal Pomp.....	Nov. 12	4.00
Illini Tangier. Reddish bronze. L. Dec.	Nov. 12	4.50
Paragon. Red. L. Formal Pomp	Nov. 12	3.50
Red King (New). M. Sgl.	Nov. 13	5.00
Cadet (New). M. Anem.	Nov. 14	5.00

11-Week Varieties—Pinch July 29

Illini Honey. Honey amber. S. Formal Pomp.....	Nov. 15	3.50
Mrs. Dewey. Deep bronze. L. Sgl.	Nov. 15	3.50
Red Princeton. Brazil red. M. Dec.....	Nov. 15	3.25
Shalimar. Orange bronze. M. Anem.	Nov. 15	4.00
Illini Redhead. Deep red. S. Formal Pomp.....	Nov. 17	3.50
Bourbon. Rust bronze. M. Sgl.	Nov. 20	3.50
Illini Warrior. Bronze orange. Button Pomp.....	Nov. 20	3.50
Legal Tender. Red gold. M. Dec.....	Nov. 20	3.00
Rusticon. Rust red. M. Formal Pomp.....	Nov. 20	3.25
Thelma. Orange scarlet. M. Formal Pomp.....	Nov. 20	4.00
Carousel. Coral bronze. M. Sgl.	Nov. 23	3.50
Red Rolinda. Red. M. Anem. Pot plant.....	Nov. 23	3.00
Bronze Minuet. Bronze Pomp. M. Formal Pomp.....	Nov. 23	3.25
Festival. Apricot red. M. Sgl.	Nov. 23	3.50

12-Week Varieties—Pinch Aug. 12

Bronze Goldsmith. Mars Orange. L. Dec.....	Nov. 25	3.25
Falcon. Reddish orange. M. Formal Pomp.....	Nov. 25	3.50
Illini Redwood (New). M. Formal Pomp.....	Nov. 25	5.00
Yolanda. Orange bronze. M. Anem.	Nov. 25	3.50
Wanakah. Sport of Hasegawa Pink. M. Sgl.....	Nov. 25	4.50
Apricot Valencia. L. Sgl.	Nov. 28	3.25
Crimson Valencia. L. Sgl.	Nov. 28	3.50
Indian Head. Reddish apricot. L. Sgl.	Nov. 28	3.50
Amberina. Orange bronze. M. Dec.	Dec. 1	4.00
Galaxy. Orange scarlet. M. Sgl.	Dec. 1	3.50

13-Week Varieties—Pinch Aug. 12

Bronze Enchantress. Sport of Enchantress. L. Anem.....	Dec. 5	3.25
Dazzler. Coppery bronze. M. Sgl. Anem.....	Dec. 5	4.00
Debonair. Crimson red. L. Formal Pomp.....	Dec. 5	3.25
Mahogany Viking. Mahogany bronze. M. Dec.....	Dec. 5	3.50

Spray Types

BRONZE AND RED—13-Week Varieties—Continued

Variety and Description	Normal Flowering Date	Price 50 Only
Bronze Supreme. Buff Apricot. L. Anem.....	Dec. 10	\$3.50
Cavalcade. Mandarin red. M. Formal Pomp.....	Dec. 10	3.50
Harlequin. Crimson red. M. Dec.	Dec. 10	4.00
Holiday. Wide-petaled crimson red. M. Sgl.....	Dec. 10	3.50
Imp. Br. Supreme (New). L. Anem.....	Dec. 10	3.50
Pageantry. Red. M. Formal Pomp.....	Dec. 10	3.50
Red Supreme. Sport of Dk. Pk. Supreme. L. Anem.....	Dec. 10	3.50
Christmas Star. Scarlet red. M. Sgl.....	Dec. 12	3.25
Bronze Minstrel. Coral sport of Minstrel. M. Formal Pomp.....	Dec. 13	3.50
Dark Bronze Minstrel. Reddish bronze sport of Minstrel. M. Formal Pomp....	Dec. 13	4.50

14-Week Varieties—Pinch Aug. 26

Bronze Riviera. Sport of Riviera. M. Dec.....	Dec. 15	3.50
Christmas Greeting. Crimson-scarlet. M. Dec.....	Dec. 15	3.50
Claret. Brilliant red. M. Sgl.	Dec. 15	4.00
Sarong. Crimson. M. Sgl.	Dec. 15	3.25
Topaz. Orange bronze. L. Sgl.	Dec. 15	4.00
Merrymaker. Scarlet. M. Sgl.	Dec. 20	3.50
Poinsettia. Scarlet red. L. Sgl.	Dec. 20	4.00

PRICES FOR MORE THAN 50 OF A VARIETY ON ONE SHIPMENT

50 Only	100-250 Per 100	300-450 Per 100	500-950 Per 100	1000-2450 Per 100	2500-up Per 100
\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
6.25	12.00	11.50	11.00	10.50	10.00
7.50	14.25	13.50	12.75	12.00	11.25

Special Collections

Any of the four collections listed at right are available at the reduced price shown if you leave the choice of varieties up to our propagator. In ordering any of these collections please specify:

1. Whether you want greenhouse or garden varieties.
2. About when you want them to flower.
3. Colors and flower types you want.
4. Time of shipment.

Our propagator reserves the right to make the choice of varieties. Your order will be filled with good varieties and the cuttings you receive will be properly labeled as to variety. And of course, only our usual top grade cuttings will be shipped. The reduction in price is made only because our propagator can select varieties that are in good supply at the time you want shipment.

- A. 250 Rooted Cuttings.....\$14.25**
50 each of 5 varieties.
- B. 500 Rooted Cuttings..... 25.50**
50 each of 10 varieties, or
100 each of 5 varieties.
- C. 1000 Rooted Cuttings..... 48.00**
50 each of 20 varieties, or
100 each of 10 varieties, or
200 each of 5 varieties.
- D. 2500 Rooted Cuttings.....112.50**
50 each of 50 varieties, or
100 each of 25 varieties, or
250 each of 10 varieties, or
500 each of 5 varieties.

Garden (HARDY) Varieties

NEW VARIETIES

OSTOSA

September 25

(De Petris) Solid, pure white, medium large pompon type. Vigorous, semi-dwarf habit. Very free flowering with good substance. 50 cuttings, \$7.50.

BUTTERCUP (H)

October 1

(De Petris) Large golden yellow incurving bloom. Free growth and good foliage as well as free flowering. 50 cuttings, \$7.50.

REGINA

October 1

(De Petris) Large decorative blooms of a pleasing coral apricot bronze color. Very free flowering. 50 cuttings, \$7.50.

LIMELIGHT

October 5

(De Petris) Very free and productive solid white pompon with a greenish cast. Excellent substance and form as well as placement. Good clean straight stems make it an excellent cutting variety. Beautiful growth and foliage. This variety should be outstanding for cutting besides making a showy white pompon for the garden, very vigorous and easily grown. 50 cuttings, \$7.50.

CORONA (H)

October 5

(De Petris) An outstanding vivid pink daisy shading to wine. Of good size and excellent substance. Very good clean stem freely produced and perfect placement. Very good growth and foliage. Excellent both for cutting and garden decoration. 50 cuttings, \$7.50.

SUNSTONE

October 8

(De Petris) Very free and vigorous plant producing many soft yellow spoon or spider-like blooms on good stems. Very good foliage. Somewhat tall growth habit. Useful for cutting as well as garden decoration. 50 cuttings, \$7.50.

CALUMET (H)

October 10

(De Petris) Outstanding full decorative blooms of good size and substance produced on strong clean stems of good length. Color is a lively apricot with a luminous glow. Beautiful foliage with very free and vigorous growth habit. This is a Rubellum hybrid which produces high quality blooms with almost perfect stems and sprays without shading. 50 cuttings, \$7.50.

CHOPIN

October 15

(De Petris) Large incurved light bronze averaging 4 to 4½ inches which grows 20 or more blooms to the plant. Very strong stems and vigorous semi-dwarf growth. 50 cuttings, \$7.50.

SARASOTA

October 15

(De Petris) Lively yellow pompon with good size and substance. Vigorous and productive, therefore suitable for cut flowers. Medium tall. 50 cuttings, \$7.50.

ARVIS

October 15

(De Petris) Vivid bronze small pompon. Free growth and good stem. 50 cuttings, \$7.50.

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single. Size of flower is indicated by S—Small; M—Medium; L—Large. P—Indicates varieties suitable for pots. C—Indicates varieties suitable for cutting. D—Indicates varieties better when disbudded.

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Variety and Description

WHITE

Variety and Description	Height	Flowering Date	Price 50 Only
Osage (New). White. Dec.	Med.	Sept. 5	\$7.50
C Candlelight. Cream-white, yellow center. Dec.	Med.	Sept. 15	3.00
P White Cushion. White, shaded pink at center. Cushion.	Short	Sept. 15	3.00
C D. D. Ahrens. Free flowering, pure white. Dec.	Tall	Sept. 10	3.00
P Paper White. White, Dec.	Med.	Sept. 10	3.50
PC Chris. Columbus. White with yellow buds. Large Dec.	Tall	Sept. 15	3.50
P Calcite. White with pale yellow center. Heavy bloomer. Dec.	Med.	Sept. 15	3.00
Drifted Snow. A mound of double white flowers, shaded yellow. Dec.	Med.	Sept. 15	3.00
P Polar Ice. Pure white, double, 3 in. flowers. L. Dec.	Med.	Sept. 15	3.50
Powder Puff (New). White Cushion. Dec.	Short	Sept. 15	3.50

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50 Only	100-250 Per 100	300-450 Per 100	500-950 Per 100	1000-2450 Per 100	2500-up Per 100
\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
6.25	12.00	11.50	11.00	10.50	10.00
7.50	14.25	13.50	12.75	12.00	11.25

Garden (HARDY) Varieties

WHITE—Continued

Variety and Description	Height	Flowering Date	Price 50 Only
PC White Bounty. White with cream center. Button.....	Tall	Sept. 15	\$3.50
DC White Tower. Cream. L. Pomp.....	Tall	Sept. 15	3.25
Ostasa (New). Large white. Pomp.	Short	Sept. 25	7.50
C White Wonder. Ball-shaped white. L. Pomp.....	Med.	Sept. 25	3.25
P Shalimar. (H). Cream. L. Pomp.....	Tall	Sept. 25	4.00
C White Cloud. White with delicate pink shading. Dec.....	Tall	Sept. 25	3.50
P Pepita. Eggshell white, darker center. Button.....	Med.	Sept. 28	3.50
Snow Fall. White, slight cream center. Dec.....	Med.	Oct. 1	3.50
Ermine. Large, wide petaled ivory white. L. Dec.....	Med.	Oct. 1	3.50
Spindrift. White. L. Dec.....	Med.	Oct. 1	5.00
C Winterset (H). Large white. Dec.....	Med.	Oct. 1	3.25
Avalanche. Cream. L. Dec.....	Tall	Oct. 5	3.25
P Horizon. White. Pomp.....	Med.	Oct. 5	4.00
Limelight (New). Pomp. White.....	Med.	Oct. 5	7.50
P Lyric. White. Sgl.....	Short	Oct. 5	4.00
C Youdath's White. Large flowered, double white. L. Dec.....	Med.	Oct. 5	3.00
P Monogram. White. Single	Short	Oct. 5	3.50
Snow Elf (New). Pomp. White.....	Med.	Oct. 8	3.50
P Classic. White Button	Tall	Oct. 10	3.50
P Maestro. White Pomp.....	Short	Oct. 10	3.50
P Renown. White single.....	Med.	Oct. 10	3.50
PC White Spoon. Pure white spoon.....	Med.	Oct. 10	3.00
P Silverplate. Productive outdoor variety. Dec.....	Med.	Oct. 12	3.50
Silver Ball. White. Pomp.....	Tall	Oct. 15	3.00
Irene. White, yellow center. Button.....	Med.	Oct. 15	3.25
Norona. White. S. Pomp.....	Med.	Oct. 15	4.00

YELLOW

Pathfinder (New). Carnation flowered lemon.....	Med.	Aug. 28	7.50
Butterball. Butter yellow. Low, compact plant. Button.....	Short	Sept. 1	3.50
P Early Gold. Golden yellow. Pomp.....	Short	Sept. 5	3.50
C Golden Hours. Chrome yellow. Pomp.....	Med.	Sept. 8	3.25
Genista. Canary Pomp.	Med.	Sept. 12	6.25
Bowl O' Gold (New). Canary Pomp. Cushion.....	Short	Sept. 15	7.50
P Pomponette. Excellent early yellow. Pomp.....	Short	Sept. 15	3.00
Sunapee. Deep lemon. Pomp.....	Tall	Sept. 15	3.25
P Yellow Supreme (H). Bright lemon. Cushion.....	Short	Sept. 15	3.00
P Yellow Chris. Columbus. Bright lemon. L. Dec.....	Med.	Sept. 15	3.50
Yellow Avalanche. Light lemon. L. Dec.....	Tall	Sept. 15	3.25
Yellow Cushion. Light yellow. Cushion.....	Short	Sept. 15	3.00
P Early Yellow. Deep lemon. Button.....	Short	Sept. 15	3.00
Defiance (H). Golden yellow. Quilled petals. Dec.....	Tall	Sept. 15	3.50
Golden Carpet. Golden yellow. Pomp.....	Short	Sept. 15	4.00
P Ming. Orange yellow pomp.....	Med.	Sept. 18	4.50
P September Sunshine. Semi-double, bright yellow.....	Med.	Sept. 20	3.25
Wychwood. Canary yellow. L. Pomp.....	Med.	Sept. 20	3.25
Canary Wonder. Canary yellow. Pomp.....	Med.	Sept. 25	4.00
C Charles Nye. Deep lemon. L. Pomp.....	Tall	Sept. 25	3.25
P Honeycomb. Golden yellow. Pomp.....	Med.	Sept. 25	3.25
Lee Powell. Chinese yellow. L. Dec.....	Tall	Sept. 25	4.50
P Moonlight. Disbud. Bright yellow. Dec.....	Med.	Sept. 25	4.50

Garden (HARDY) Varieties

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single. Size of flower is indicated by S—Small; M—Medium; L—Large. P—Indicates varieties suitable for pots. C—Indicates varieties suitable for cutting. D—Indicates varieties better when disbudded.

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YELLOW—Continued

Variety and Description	Height	Flowering Date	Price 50 Only
Tangerine. Deep orange. L. Dec.....	Med.	Sept. 25	\$3.25
Flaxen Beauty. Light lemon. L. Dec.....	Med.	Oct. 1	4.50
King Midas. Light lemon yellow. L. Dec.....	Med.	Oct. 1	3.00
P Chiquita. Deep lemon. Pomp.....	Med.	Oct. 1	3.25
Dwight Douglas. Golden yellow. L. Dec.....	Med.	Oct. 5	6.25
Garland. Lemon. Sgl.	Short	Oct. 5	4.00
C James Eadie. Deep chrome. L. Pomp.....	Tall	Oct. 5	3.25
C Polaris. Golden buff. Sgl.....	Med.	Oct. 5	3.50
P Mrs. Rotan. Deep chrome. L. Dec.....	Med.	Oct. 5	3.25
Vanguard. Golden. L. Pomp.....	Med.	Oct. 5	4.00
Sunstone (New). Lt. yellow. Spoon.....	Tall	Oct. 8	7.50
P Yellow Spoon. Light yellow Spoon variety.....	Med.	Oct. 10	3.50
Golden Spoon. Golden yellow. Spoon.....	Med.	Oct. 10	3.00
P Yellow Blanket. Bright lemon. Button.....	Med.	Oct. 10	3.25
Bright Forecast. Lemon Pomp.....	Med.	Oct. 10	3.50
P Goldrush. Lemon yellow. Sgl.....	Med.	Oct. 10	3.50
Treasure. Golden. Pomp.....	Tall	Oct. 10	4.00
P Lemonade. Ivory yellow. Pomp.....	Med.	Oct. 12	3.50
Sweepstake. Lemon. Pomp.....	Med.	Oct. 12	3.50
Buttercup (H) (New). L. Inc. Golden.....	Short	Oct. 15	7.50
P Gold Lode. L. Inc. Golden.....	Med.	Oct. 15	3.00
Judith Anderson. Golden yellow. Button.....	Med.	Oct. 15	3.00
Rodell Imp. Light lemon. Button.....	Med.	Oct. 15	3.00
Yellow Irene. Light lemon. Button.....	Med.	Oct. 15	3.25
Old Gold. Golden Pomp.....	Med.	Oct. 15	3.25
Sarasota (New). Bright lemon. Pomp.....	Med.	Oct. 15	7.50

PINK

Gladness. China rose. Dec.....	Short	Aug. 28	3.50
Cecil Beed. Deep lavender. Dec.....	Med.	Sept. 1	4.50
Dr. Graham (New). Lavender. Dec.....	Med.	Sept. 1	7.50
C Dr. Longley. Rose pink. Dec.....	Med.	Sept. 1	4.00
Salmon Precose. Salmon pink. L. Dec.....	Short	Sept. 1	3.50
P Welcome. Rose pink. Sgl.....	Med.	Sept. 1	3.00
P Purple Star. Star appearance. Dahlia purple. Pomp.....	Med.	Sept. 5	3.00
Rosa (New). Rose Pink. Cushion.....	Med.	Sept. 5	7.50
C Barbara Small. Pinkish lavender. Pomp.....	Tall	Sept. 10	3.25
DC Nye's Favorite. Lavender. Dec.....	Med.	Sept. 10	3.50
P Orchid Helen. Orchid lavender. Dec.....	Med.	Sept. 10	4.00
Chippewa. Bright purple. L. Dec.....	Med.	Sept. 15	3.25
Royal Robe. Purple. Dec.....	Med.	Sept. 15	5.00
C Violet. Amaranth pink. Pomp.....	Med.	Sept. 15	3.25
Fairbow. Lavender pink. Pomp.....	Med.	Sept. 20	3.50
Tapestry. Bright pink. L. Dec.....	Med.	Sept. 20	4.00
Heather Bloom. Heather pink. Dec.....	Med.	Sept. 20	3.00
P Alert. Dark purple. L. Dec.....	Med.	Sept. 20	3.00
P Major Cushion. Lavender. Cushion.....	Short	Sept. 25	3.00
Olive Longland. Apricot-salmon. L. Dec.....	Med.	Sept. 25	3.00

Garden (HARDY) Varieties

PINK—Continued

Variety and Description		Height	Flowering Date	Price 50 Only
PC	Spellbound. Lavender-pink. Dec.....	Med.	Sept. 25	\$3.25
	Capt. J. Smith. Lavender-pink. Cushion.....	Short	Sept. 25	3.00
C	Pink Beauty. Salmon pink. Dec.....	Med.	Sept. 25	3.00
	September Dawn. Rose pink. Dec.....	Med.	Sept. 25	3.00
	Imp. Early Wonder. Deep lavender. Pomp.....	Med.	Sept. 25	3.25
	Rosita. Lavender rose. Button.....	Med.	Sept. 28	3.25
	Pink Opal. Persian rose. Pomp.....	Med.	Sept. 28	4.50
C	Betty. Pink, rose center. L. Dec.....	Tall	Sept. 28	3.50
	Misty Maid. Light pink. Dec.....	Med.	Sept. 28	3.50
	Malinda Brown. Lavender rose. Pomp.....	Med.	Sept. 28	5.00
C	Pat Lehmann. Peach pink. Dec.....	Tall	Sept. 28	4.00
	Fascination. Lavender pink. L. Dec.....	Med.	Oct. 1	5.00
	Mischief (New). Purple. Sgl.....	Short	Oct. 1	7.50
PD	Myrtle Walgreen. Amaranth purple. L. Pomp.....	Med.	Oct. 1	3.50
P	Tiffany Rose. Deep rose. Sgl.....	Med.	Oct. 1	3.00
	Alex. Cummings. Deep rose. L. Dec.....	Tall	Oct. 3	5.00
	Corona (H) (New). Deep lavender. Sgl.....	Tall	Oct. 5	7.50
	Enterprise. Amaranth. Pomp.....	Tall	Oct. 5	4.50
P	Pink Surprise. Lavender. Dec.....	Tall	Oct. 5	3.50
P	Lavender Lady. Lavender pink. Dec.....	Tall	Oct. 5	3.50
	Ponca. Dark lavender. S. Dec.	Short	Oct. 10	3.50
	Dream Girl. Light lavender. Pomp.....	Med.	Oct. 10	3.50
	Argonne. Dark lavender. Pomp.....	Med.	Oct. 10	3.50
P	Courtier. Lavender pink. Dec.....	Med.	Oct. 10	4.00
	Time (New). Lavender. L. Pomp.....	Med.	Oct. 10	3.50
	Lassie. Dark pink. L. Dec.....	Med.	Oct. 10	4.00
	Orchid Spoon. Orchid lavender. Spoon.....	Med.	Oct. 10	3.50
	Rose Spoon. Lavender rose. Spoon.....	Med.	Oct. 10	3.00
P	Masquerade. Lavender rose. Pomp.....	Med.	Oct. 10	3.50
P	Joybringer. Salmon rose. Dec.....	Short	Oct. 10	3.50
P	Serenade. Magenta. Sgl.	Tall	Oct. 10	3.50
	Elizabeth Hood. Lavender pink. L. Dec.....	Med.	Oct. 12	4.50
	Ronnie. Dark lavender. Button.....	Med.	Oct. 12	3.50
C	Allegro. Shrimp pink. Pomp.....	Tall	Oct. 12	3.25
	Adagio. Raspberry rose. Pomp.....	Tall	Oct. 12	3.50
	Dawn Rose. Grenadine pink. L. Dec.....	Med.	Oct. 15	3.50
P	Jewell. Lavender pink. Pomp.....	Med.	Oct. 15	3.25
P	Dark Jewell. Dark lavender. Pomp.....	Med.	Oct. 15	3.25

BRONZE AND RED

	Early Harvest. Mahogany-orange. Cushion.....	Short	Sept. 8	3.25
	Harbinger. Golden bronze. Dec.....	Short	Sept. 8	3.25
P	Early Bronze. Orange bronze. Button.....	Short	Sept. 8	3.00
PC	W. P. Snyder. Apricot-orange. L. Pomp.....	Med.	Sept. 10	3.50
	Autumn Song. Wine-rose. Dec.....	Med.	Sept. 10	3.25
	Apache (New). Red and gold. L. Dec.....	Med.	Sept. 15	7.50
C	Red Gold. Red and gold. Button.....	Med.	Sept. 15	3.25
	Orloma. Apricot bronze. Dec.....	Med.	Sept. 15	6.25
	September Bronze. Golden bronze. Frost resistant. Button.....	Med.	Sept. 20	3.00
	Goblin. Golden bronze. Pomp.....	Tall	Sept. 20	3.00
	Red Glow. Dark red. Pomp.....	Med.	Sept. 20	3.50
P	Orsona. Red and bronze. Dec.....	Med.	Sept. 20	6.25
	Overly (New). Bronze. Cushion.....	Med.	Sept. 20	7.50
	Scarlet Crimson. Bright red. Dec.....	Med.	Sept. 20	3.25

Garden (HARDY) Varieties

Types are abbreviated as follows. Pomp.—Pompon; Dec.—Decorative; Sgl.—Single. Size of flower is indicated by S—Small; M—Medium; L—Large. P—Indicates varieties suitable for pots. C—Indicates varieties suitable for cutting. D—Indicates varieties better when disbudded.

Note carefully instructions for ordering on inside front cover. No orders for less than 50 rooted cuttings of a variety accepted. Minimum total order, 500 cuttings.

BRONZE AND RED—Continued

Variety and Description	Height	Flowering Date	Price 50 Only
Mme. Cadillac. Raspberry wine. Pomp.....	Short	Sept. 20	\$6.25
Br. Wonder (New). Rosewood. L. Pomp.....	Med.	Sept. 25	4.00
Rouge Cushion. Bright red. Cushion.....	Short	Sept. 25	4.50
Champion Cushion. Deep bronze. Cushion.....	Short	Sept. 25	3.00
Commander Cushion. Deep bronze. Cushion.....	Short	Sept. 25	3.00
Mahogany Cushion. Jasper red. Cushion.....	Short	Sept. 25	3.00
Marionette. Rust red. Pomp.....	Med.	Sept. 25	3.50
Holiday (H). Golden bronze. Pomp.....	Med.	Sept. 25	4.50
Admiration (New). Salmon fawn. L. Dec.....	Med.	Sept. 28	7.50
P Remembrance. Deep carmine. L. Dec.....	Med.	Sept. 28	3.50
C Kathleen Lehman. Orange bronze. L. Dec.....	Med.	Sept. 28	4.00
Fiesta. Orange rust. Pomp.....	Med.	Oct. 1	3.50
Jubilee (H). Crimson. Pomp.....	Med.	Oct. 1	5.00
C Magnificent. Plum red. L. Dec.....	Tall	Oct. 1	3.50
Red Riding Hood. Bright red; frost resistant. Dec.....	Med.	Oct. 1	3.25
Sam Williston. Deep red. Cushion.....	Short	Oct. 1	3.00
CP Bonfire. Bright red. Dec.....	Med.	Oct. 1	3.50
Mogul. Orange rust. Pomp.....	Med.	Oct. 1	4.50
Brigadier. Plum red. L. Pomp.....	Med.	Oct. 1	4.50
Cardinal Spoon. Cardinal red, yellow tube. Spoon.....	Med.	Oct. 1	3.50
Reverie (New). Buff bronze. Dec.....	Med.	Oct. 1	7.50
Red Cloud (New). Scarlet. Cushion.....	Med.	Oct. 1	3.50
Gondolier (New). Crimson. L. Dec.....	Med.	Oct. 1	7.50
Regina (New). Apricot bronze. L. Dec.....	Med.	Oct. 1	7.50
Firecracker. Mahogany. Dec.	Tall	Oct. 5	4.00
Avalon. Orange bronze. Pomp.....	Tall	Oct. 5	4.50
C Cydonia. Mahogany red. L. Dec.....	Tall	Oct. 5	3.00
P September Cheer. Cherry red. Sgl.....	Med.	Oct. 5	3.00
C Burgundy. Wine red. L. Dec.....	Tall	Oct. 5	3.00
Ruby Pompon. Ruby crimson. Pomp.....	Med.	Oct. 5	3.00
P Red Velvet. Dark crimson. L. Dec.....	Med.	Oct. 5	3.25
P Mona. Rust bronze. Pomp.....	Med.	Oct. 5	3.50
Courageous. Dark ruby. Frost resistant. L. Dec.....	Med.	Oct. 5	3.25
P Mrs. DuPont. Coral buff. L. Dec.....	Tall	Oct. 5	3.50
Beacon. Coral apricot. L. Dec.....	Tall	Oct. 8	3.50
Panorama. Orange rust. Dec.....	Tall	Oct. 8	4.50
Success (New). Deep crimson. L. Pomp.....	Med.	Oct. 8	3.50
Aviator. Copper. Pomp.....	Med.	Oct. 8	3.25
CP Amber Glow. Rosy bronze. L. Dec.....	Tall	Oct. 8	3.25
Miguel. Raspberry red. Dec.....	Tall	Oct. 8	6.25
Mayford's Triumph. Scarlet bronze. L. Inc.....	Tall	Oct. 8	3.50
PD Calumet (H) (New). Apricot. Dec.....	Med.	Oct. 10	7.50
The Chief. Scarlet and gold. Dec.....	Med.	Oct. 10	3.00
P James Stewart. Apricot-gold. Pomp.....	Tall	Oct. 10	3.50
Huntsman. Scarlet orange. L. Dec.....	Tall	Oct. 10	3.50
Caravan. Salmon bronze. L. Dec.....	Med.	Oct. 10	4.00
Bokhara. Crimson. Dec.....	Med.	Oct. 10	3.50
Blueblood. Amaranth red. Dec.....	Tall	Oct. 10	4.00
PC Carnival. Burnt orange. L. Pomp.....	Med.	Oct. 10	3.50
C Carmine Queen. Carmine. L. Pomp.....	Tall	Oct. 10	3.50

Garden (HARDY) Varieties

BRONZE AND RED—Continued

Variety and Description	Height	Flowering Date	Price 50 Only
Orpheus. Roman red. L. Pomp.....	Tall	Oct. 10	\$6.25
P Bamboo. Buff orange. Sgl.....	Tall	Oct. 10	3.50
Fireside. Burnt orange. Dec.....	Tall	Oct. 10	3.50
Nytoda. Golden apricot. Sgl.....	Med.	Oct. 12	4.50
Admiral. Dark red. Dec.....	Med.	Oct. 12	4.00
Fashion. Salmon and rosewood. Dec.....	Med.	Oct. 12	4.00
P Witchery. Golden bronze. Dec.....	Med.	Oct. 12	3.50
Nokomis. Reddish bronze. L. Dec.....	Med.	Oct. 12	3.50
Nocturne. Crimson. Pomp.....	Med.	Oct. 12	3.50
Arvis (New). Bronze. Pomp.....	Tall	Oct. 15	7.50
Chopin (New). Light Bronze. L. Inc.....	Med.	Oct. 15	7.50
Robinhue. Dark red. L. Dec.....	Tall	Oct. 15	3.50
C Bronze Pyramid. Orange bronze. L. Dec.....	Tall	Oct. 15	3.25
Detroitier. Red-bronze. Pomp.....	Tall	Oct. 15	3.50
P Carmelita. Apricot bronze. L. Dec.....	Tall	Oct. 15	3.50
Cocktail. Salmon bronze. Pomp.....	Med.	Oct. 15	4.00
Rajah. Scarlet. Sgl.....	Med.	Oct. 15	4.00

PRICES FOR MORE THAN 50 OF A VARIETY ON ONE SHIPMENT

50 Only	100-250 Per 100	300-450 Per 100	500-950 Per 100	1000-2450 Per 100	2500-up Per 100
\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
6.25	12.00	11.50	11.00	10.50	10.00
7.50	14.25	13.50	12.75	12.00	11.25

SPECIAL COLLECTIONS of GARDEN VARIETIES

For growers who are not familiar with Garden Varieties, but who want a well-balanced assortment, we offer the following collections, which include the better varieties.

SPECIAL OFFER #1

Taller varieties for cutting.

SPECIAL OFFER #2

For pots or bedding.

SPECIAL OFFER #3

50% for cutting;
50% for bedding.

SPECIAL OFFER #4

For Easter, Mother's Day
or Memorial Day pots.

Prices above 4 Collections, each: 250 cuttings, **\$14.25**; 500 cuttings, **\$25.50**; 1000 cuttings, **\$48.00**; 2500 cuttings, **\$112.50**. Be sure to state which collection you want.

IMPORTANT: ABSOLUTELY NO CHANGES ON YOUR ORDER CAN BE ACCEPTED WITHIN 30 DAYS OF DELIVERY DATE.

Have You Seen the Ball Mum Film?

Mum's the Word!

Here's 25 minutes of real down-to-earth dope on year 'round mum growing. It's in sound and colorful 16 mm Kodachrome. Like all Ball grower-service material, the film presents both sides of the story. It will answer many of the questions in your mind on this fast rising and important new slant on mum growing.

Highlights of the film:

Why year 'round mums?

The film covers the advantages to the grower of year 'round flowering, plus a frank discussion of typical objections.

This part of the story is done through an interview between a typical salesman and an equally true-to-type grower. You'll hear them argue the pros and cons of "whether continuous flowering will pay Tom Robbins". Although both grower and salesman are really TV and dramatic actors, you'll swear they "belong" to their parts.

How to grow them?

The second main point covered: the film covers methods of lighting, shading and sterilizing soils and also angles on mechanizing mum production (automatic heating, watering, etc.)

Planning, too, is discussed including the importance of selection of proper varieties for each season of the year. The role of Mum Planning Services such as we offer (p. 16) is also covered.

How to get the film:

The film is available for showing to all interested professional floricultural groups—at no charge. **Simply write us giving name of your group and date desired.** Please return film **promptly!** It's available now.

The film was produced by Geo. J. Ball, Inc., as a service to cut flower growers generally. It does not "sell" any specific propagator or dealer in cuttings.

And a Word About

Grower Talks

An issue a month crammed full of useful practical pointers on growing.

TYPICAL SUBJECTS:

- How-to-grow-it stories on major crops: snaps, mums, bedding plants, etc.
- Monthly sowing reminders.
- Notes on new varieties.
- What's new in greenhouse heating.
- Notes on steaming soils.
- New developments on insect control.
- New labor-saving equipment for watering, feeding, etc.
- Notes on trips by staff members, short course highlights.

Written by the staff of Geo. J. Ball, Inc. Price: **90c** for one year; 3 years for **\$2.50**.

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Hoseboye

Do you spend more time watering than you can spare from all your other work?

Here is your chance to get your watering done right and still have more—yes, more—time to do the other chores that must be done.

HOSEBOYE

is an automatic, economical method of watering. You need only place this electric powered hose reel and sprinkler in position, turn it on, and go about your other tasks until two benches are watered. Then on to the next aisle.

For a complete description, see February '53 GROWER TALKS.

HOSEBOYE, complete with 150 ft. $\frac{3}{4}$ in. ID plastic hose, sled and 2 fan-type flat spray nozzles. **\$395.00.** F.O.B. Cincinnati.

Mfg. by Oldfield Equipment Co. and distributed exclusively by Geo. J. Ball, Inc.



ADAPTABLE!

Water 1 bench, 2 benches, or the whole house with fine mist or heavy spray, whichever is needed. Use for raised or ground beds.



PORTABLE!

easily moved from one bench or house to another.



EASILY ADJUSTED!

You don't have to be a master mechanic to use it.



Yoder Bros.' Carnation Varieties

1952-'53 INTRODUCTIONS



YODER CARNATIONS

Geo. K. Ball looking over a bench of Yoder's new Carnations at West Chicago.

These are the first of a series of Carnations developed by Yoder Bros. of Barberton, Ohio from disease-free seedling strains. They are not disease-resistant, but they are as free of disease as you can get Carnation stock; and given the same care you would give ordinary commercial Carnation varieties, they will give you more quality flowers—more dollars per square foot of bench space than the regular varieties.

The demand for these varieties has been heavy—get your order in now to be sure of the quantities and varieties you want. Shipped from September thru June. F.O.B. Barberton, Ohio. Minimum order, 50 cuttings of a variety.

Achilles. A large, clear white; petals deeply serrated. Larger than Jupiter and more productive. Fast, early producer on long, strong stems. Free comeback in winter. All-year white.

Juno. A medium sized, flat, well-formed white flower; very full center; free comeback in winter. Good from early fall to late spring. Good keeper and shipper.

Titan. An intense crimson red, not quite as tall as Vulcan. Gets into production fast. Very full flower, outstanding flower substance. Consistently high production.

Cupid. Color a true Briarcliff pink; size medium. Very heavy producer, at its best December thru April. Flower is small in summer, but color remains excellent. A good keeper.

Eros. Light pink, similar to Aphrodite in color, except that it is deeper in the summer and early fall. Vigorous, heavy growth; long, strong stems. Early flowering and fast comeback. Large flowers with good average production. Some splitting in early fall, but disappears as soon as night temperatures are maintained. Fine for late spring, summer and early fall.

Siren. Scarlet, combining heavy production with fast comeback, uniform cropping, on stems of medium length. This variety grows to about the same height as Aphrodite and its production is equal to that of Apollo. Siren will out-produce Neptune. It should find a very important place among the varieties now available in this color class.

Cassandra. Yellow and pink variegated; very similar to Orion, but flowers are larger and stems stronger. Variety never splits; shows excellent flower substance; an outstanding keeper.

Pandora. Dark pink with sufficient suffusion of salmon to make it an exceptionally beautiful color under artificial light. This variety will fade during heat of summer, but is really a new color for December thru April. Good average production; fine flower substance.

PRICES above 8 varieties:

	Per 100	Per 100
50 of a variety	\$15.00	500-950 of a variety \$12.75
100-250 of a variety	14.25	1000-2450 of a variety 12.00
300-450 of a variety	13.50	2500-up of a variety 11.25

Quantity prices apply to any one variety only.

PREVIOUS INTRODUCTIONS

WHITE

Jupiter. A large, strong stemmed white.

Aurora. Another exceptionally large, white flower. Does well in late spring and early fall.

Adonis. A winter white. Satisfactory flower quality and good production. This variety is competition for Olivette.

PINK

Apollo. An outstanding salmon pink, larger than Netta. A good summer flower, well suited to all areas of the country.

Aphrodite. A clear light pink; outside petals bleach a little in late spring and early fall, but do not burn. A good, early producer with an early comeback, it is at its best in areas of relatively high light intensity.

Diana. Light pink; a good producer.

Venus. A show variety. Extra large, beautiful, long stemmed, salmon pink flower.

ROSE

Minerva. An unusual deep scarlet pink. Good summer flower—fades in very high light intensity, but fades uniformly with no white edge. Heavy break-back; fine keeper.

RED-SCARLET

Ceres. Beautiful King Cardinal color and exceptionally high production. Early, with heavy comeback.

Neptune. Scarlet (color resembles that of Wm. Sim); a free breaker, fine stretch. A very satisfactory variety.

MAROON

Vulcan. Excellent keeper, good comeback. Best maroon.

YELLOW

Midas. A good yellow Carnation. Production very satisfactory. Strongly recommended where Miller's Yellow is a problem.

VARIEGATED

Orion. Color resembles that of Glowing Ember. An excellent grower and producer.

Saturn. A beautiful warm bronze variegated; excellent under artificial light. Promises to become a very popular novelty.

PRICES above 14 varieties:

	Per 100	Per 100
50 of a variety	\$13.50	500-950 of a variety \$11.45
100-250 of a variety	12.80	1000-2450 of a variety 10.80
300-450 of a variety	12.15	2500-up of a variety 10.10

Quantity prices apply to any one variety only.

MUM VARIETY INDEX ON PAGE 77



ORDER BLANK
Rooted Mum Cuttings—1954
GREENHOUSE VARIETIES

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IMPORTANT!—To insure your order being shipped on the date you specify, we suggest that you order at least 6 months in advance of delivery date. ABSOLUTELY NO CHANGES ON YOUR ORDER CAN BE ACCEPTED WITHIN 30 DAYS OF DELIVERY DATE. Minimum order 500, 50 of a variety, or multiples of 50. Please mark SPECIFIC shipping date.

LIMITATION OF WARRANTY. Geo. J. Ball, Inc., warrants to the extent of the purchase price that seeds, plants, or bulbs sold are as described on the container with recognized tolerances. Seller gives no other or further warranty, express or implied.

WHITE SPRAY TYPES

Quan.	Variety	Price 50 Only	Unit Price	Amount	Quan.	Variety	Price 50 Only	Unit Price	Amount	Quan.	Variety	Price 50 Only	Unit Price	Amount
7-Week Varieties					12-Week Varieties					13-Week Varieties				
.....	Sept. Morn	\$3.50	.....	.....	.....	Freedom	\$5.00	.....	.....	.....	Wh. Lady	\$4.50	.....	.....
.....	Wh. Wonder	3.25	.....	.....	.....	Kolowa	3.50	.....	.....	.....	Yh. Yuletide	3.00	.....	.....
.....	Chris. Columbus	3.50	.....	.....	.....	Madonna	4.00	.....	.....	.....	Wh. Valencia	3.50	.....	.....
.....	Avalanche	3.25	.....	.....	.....	Wh. Anemone	3.50	.....	.....	.....	Cordova	3.25	.....	.....
.....	Wh. Cloud	3.50	.....	.....	.....	Wh. Mensa	3.25	.....	.....	.....	Fortune	3.50	.....	.....
.....	Horizon	4.00	.....	.....	.....	Whitetop	5.00	.....	.....	.....	Monarch	4.00	.....	.....
.....	Marshmallow	5.00	.....	.....	.....	Moonglow	3.50	.....	.....	14-Week Varieties				
.....	Classic	3.50	.....	.....	.....	Rev. Bushnell	3.50	.....	.....	.....	Acclaim	4.00	.....	.....
.....	Maestro	3.50	.....	.....	.....	Dynamo	4.00	.....	.....	.....	Cameo	3.00	.....	.....
.....	Renown	3.50	.....	.....	.....	Ill. Igloo	4.50	.....	.....	.....	Cotillion	4.00	.....	.....
.....	Silverplate	3.50	.....	.....	.....	Little America	3.00	.....	.....	.....	Spangles	3.50	.....	.....
8-Week Varieties					.....	Nagona (Calif. Wh.	.....	.....	.....	.....	Swan	3.50	.....	.....
.....	Calif. Wh. Daisy	3.50	.....	.....	.....	Mensa)	3.50	.....	.....	.....	Wh. Enchantress	5.00	.....	.....
.....	Irene	3.25	.....	.....	.....	Pacesetter	5.00	.....	.....	.....	Carrara	4.50	.....	.....
.....	Norona	4.00	.....	.....	.....	Shasta	3.00	.....	.....	.....	Snowdrop	4.00	.....	.....
.....	Silver Ball	3.00	.....	.....	.....	Vesper	3.25	.....	.....	.....	Ill. Starlet	5.00	.....	.....
.....	Minong	3.00	.....	.....	.....	Ill. Snowdrift	3.50	.....	.....	.....	Snow Queen	4.00	.....	.....
.....	Pristine	3.50	.....	.....	.....	Matchless	3.25	.....	.....	.....	Imp. Wh.	.....	.....	.....
.....	Silvertone	5.00	.....	.....	.....	11-Week Varieties					.....	Supreme	3.50	.....
9-Week Varieties					.....	Eakimo	4.00	.....	.....	.....	Yukon	3.00	.....	.....
.....	Cotton Top	3.25	.....	.....	.....	Lakme	3.50	.....	.....	15-Week Varieties				
.....	Keepsake	4.00	.....	.....	.....	Sculpture	4.00	.....	.....	.....	Muto's White	3.00	.....	.....
.....	Pinocchio	3.00	.....	.....	.....	Snowflurry	3.50	.....	.....	.....	Revelation	3.00	.....	.....
.....	Popcorn	3.25	.....	.....	.....	Wh. Freida	3.00	.....	.....	.....	Snow	3.00	.....	.....
.....	Shooting Star	4.00	.....	.....	.....	Wh. Norma	3.50	.....	.....	.....	Talmeda	5.00	.....	.....
.....	Songster	3.50	.....	.....	.....	Highbrow	3.50	.....	.....	.....	Ill. Snowbound	4.50	.....	.....
.....	Wh. Popcorn	4.00	.....	.....	.....	L. I. Beauty	3.00	.....	.....	YELLOW SPRAY TYPES				
.....	Arcadia	3.25	.....	.....	.....	Nevada	3.25	.....	.....	.....	Polaris	3.50	.....	.....
.....	Halo	3.50	.....	.....	.....	Priscilla	3.00	.....	.....	.....	Chas. Nye	3.25	.....	.....
.....	Seagull	3.00	.....	.....	.....	Seafoam	3.25	.....	.....	.....	Garland	4.00	.....	.....
.....	Silver Cloud	5.00	.....	.....	.....	Crystal Beauty	3.50	.....	.....	.....	Yel. Spoon	3.50	.....	.....
.....	Wh. Doty	3.25	.....	.....	.....	Ill. Bountiful	3.50	.....	.....	.....	Br. Forecast	3.50	.....	.....
10-Week Varieties					.....	Paramount	3.50	.....	.....	.....	Goldrush	3.50	.....	.....
.....	Encore	3.25	.....	.....	.....	Belray	3.50	.....	.....	.....	Lee Powell	4.50	.....	.....

7-Week Varieties

.....	Yel. Chris.	.....	.....	.....
.....	Columbus	\$3.50	.....	.....
.....	Moonlight	4.50	.....	.....
.....	Honeycomb	3.25	.....	.....

.....	Polaris	3.50	.....	.....
.....	Chas. Nye	3.25	.....	.....
.....	Garland	4.00	.....	.....
.....	Yel. Spoon	3.50	.....	.....
.....	Br. Forecast	3.50	.....	.....

.....	Goldrush	3.50	.....	.....
.....	Lee Powell	4.50	.....	.....
.....	Treasure	4.00	.....	.....
.....	Lemonade	3.50	.....	.....
.....	Sweepstake	3.50	.....	.....

GREENHOUSE VARIETIES

YELLOW SPRAY TYPES, Continued

Quan.	Variety	Price 50 Only	Unit Price	Amount
8-Week Varieties				
.....	Arlora	\$5.00	.....	.....
.....	Yel. Irene	3.25	.....	.....
.....	Creampuff	5.00	.....	.....
.....	Moondrift	4.50	.....	.....
.....	Rodell Imp.	3.00	.....	.....
.....	Cream Dot	3.00	.....	.....
.....	Gold Coast	3.00	.....	.....
.....	Golden Herald	3.00	.....	.....
.....	Ordalia	5.00	.....	.....
.....	Red Dot	3.00	.....	.....
.....	Starlight	5.00	.....	.....
.....	Yel. Dot	3.00	.....	.....
.....	Yel. Firebird	3.25	.....	.....
.....	Aztec	5.00	.....	.....
.....	Sunup	4.00	.....	.....
.....	Yel. Arcadia	3.25	.....	.....
.....	Sauterne	5.00	.....	.....
.....	Gondola	5.00	.....	.....
.....	Calif. Yel. Daisy	3.50	.....	.....
.....	Mary Gold	3.00	.....	.....
.....	Mary Hall	3.00	.....	.....
.....	Schneeburg's	.....	.....	.....
.....	Daisy	3.50	.....	.....
.....	Starbright	3.50	.....	.....
.....	Yel. Cassandra	3.50	.....	.....
.....	Yel. Daisy	3.25	.....	.....
.....	Yel. Doty	3.25	.....	.....
.....	Yel. Halo	4.50	.....	.....
.....	Yel. Sea Gull	3.00	.....	.....
.....	Sunray	3.00	.....	.....
.....	Honeymoon	5.00	.....	.....

10-Week Varieties				
.....	Bridagoon	4.00	.....	.....
.....	Barcarole	3.25	.....	.....
.....	Constellation	3.00	.....	.....
.....	Crescendo	3.50	.....	.....
.....	Golden Mensa	3.25	.....	.....
.....	Nuggets	3.00	.....	.....

7-Week Varieties				
.....	Early Wonder	\$3.25	.....	.....
.....	Spellbound	3.25	.....	.....
.....	Petrisian Mauve	7.50	.....	.....
.....	Petrisian Pink	7.50	.....	.....
.....	Petrisian Rose	7.50	.....	.....
.....	Argonne	3.50	.....	.....
.....	Brigadier	4.50	.....	.....
.....	Courtier	4.00	.....	.....
.....	Dream Girl	3.50	.....	.....
.....	Joybringer	3.50	.....	.....
.....	Lassie	4.00	.....	.....
.....	Orchid Spoon	3.50	.....	.....
.....	Ponca	3.50	.....	.....
.....	Serenade	3.50	.....	.....
.....	Sweetheart	3.50	.....	.....
.....	Adagio	3.50	.....	.....
.....	Allegro	3.25	.....	.....
.....	Lav. Lady	3.50	.....	.....
.....	Masquerade	3.50	.....	.....
.....	Ronnie	3.50	.....	.....
.....	Salute	3.50	.....	.....
.....	Betty	3.50	.....	.....
.....	Sonnet	5.00	.....	.....

8-Week Varieties				
.....	Citation	5.00	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Pixie	\$3.25	.....	.....
.....	Lila Lily	3.50	.....	.....
.....	Mason's Yellow	3.50	.....	.....
.....	Yel. Beauty	3.25	.....	.....
.....	Yel. Nagona	3.50	.....	.....
.....	Yel. Shasta	3.00	.....	.....
.....	Ill. Goldcup	3.50	.....	.....

11-Week Varieties				
.....	Forty-Niner	3.25	.....	.....
.....	Golden Chord	3.25	.....	.....
.....	Princeton	3.25	.....	.....
.....	Thorbred	4.00	.....	.....
.....	Yel. Fellow	3.25	.....	.....
.....	Tacoma	4.50	.....	.....
.....	Susanne Miller	3.50	.....	.....
.....	Ill. Brave	3.50	.....	.....
.....	Bojangles	3.50	.....	.....
.....	Ill. Sunspot	4.50	.....	.....
.....	Klondike	3.50	.....	.....
.....	Lollipop	3.50	.....	.....
.....	Pippin	4.00	.....	.....
.....	Yel. Highbrow	4.50	.....	.....
.....	Yel. L. I. Beauty	3.50	.....	.....
.....	Yel. Nevada	3.25	.....	.....
.....	Yel. Paramount	5.00	.....	.....
.....	Yel. Rolinda	3.00	.....	.....

12-Week Varieties				
.....	Champagne	3.50	.....	.....
.....	Goldenrod	4.00	.....	.....
.....	Goldsmith	3.25	.....	.....
.....	Highlander	4.00	.....	.....
.....	Ill. Gold	3.25	.....	.....
.....	Sunnyside	3.00	.....	.....
.....	Yel. Priscilla	3.50	.....	.....
.....	Golden Jane	3.25	.....	.....
.....	Yel. Valencia	3.25	.....	.....
.....	Yel. Cordova	3.25	.....	.....
.....	Nosegay	4.00	.....	.....
.....	Omega	3.00	.....	.....

PINK SPRAY TYPES

.....	Dk. Jewell	3.25	.....	.....
.....	Eliz. Hood	4.50	.....	.....
.....	Enterprise	4.50	.....	.....
.....	Fairyland	5.00	.....	.....
.....	Jewell	3.25	.....	.....
.....	Mayfair	5.00	.....	.....
.....	Jester	5.00	.....	.....
.....	Carolyn Yosick	3.00	.....	.....
.....	Mirth	5.00	.....	.....
.....	Capt. Cook	3.00	.....	.....
.....	Pk. Sprite	3.50	.....	.....
.....	Mary McArthur	3.50	.....	.....
.....	Prelude	5.00	.....	.....

9-Week Varieties				
.....	Betty Rose	3.50	.....	.....
.....	Edith Roberts	3.50	.....	.....
.....	Jessie	3.00	.....	.....
.....	Oct. Pink	3.25	.....	.....
.....	Pk. Dot	3.00	.....	.....
.....	Pinkette	5.00	.....	.....
.....	Reward	3.50	.....	.....
.....	Vogue	5.00	.....	.....
.....	Arbutus	4.50	.....	.....
.....	Ballerina	3.50	.....	.....
.....	Bluechip	5.00	.....	.....
.....	Lillian Doty	3.25	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Yel. Fortune	\$5.00	.....	.....
.....	Yel. Galaxy	4.50	.....	.....

13-Week Varieties				
.....	Golden Harvest	3.50	.....	.....
.....	Brandywine	4.00	.....	.....
.....	Cinderella	3.50	.....	.....
.....	Goldtone	3.50	.....	.....
.....	Jack-Pot	4.00	.....	.....
.....	Symmetry	4.00	.....	.....
.....	Yel. Acclaim	5.00	.....	.....
.....	Yel. Cameo	3.00	.....	.....
.....	Yel. Spangles	4.50	.....	.....
.....	Yel. Swan	3.50	.....	.....
.....	Imp. Yel.	.....	.....	.....
.....	Supreme	3.50	.....	.....
.....	Challenge	3.50	.....	.....
.....	Corsair	4.00	.....	.....

14-Week Varieties				
.....	Cream Snowcrest	4.50	.....	.....
.....	Yel. Riviera	3.50	.....	.....
.....	Yel. Snowcap	5.00	.....	.....
.....	Yel. Snowcrest	4.00	.....	.....
.....	Dec. Gold	3.25	.....	.....
.....	Sequin	3.50	.....	.....
.....	Shamrock	3.50	.....	.....
.....	Yel. Garza	3.25	.....	.....
.....	Gold Seal	4.50	.....	.....
.....	Revelry	4.00	.....	.....
.....	Sunkist	3.50	.....	.....
.....	Sunrise	4.00	.....	.....
.....	Vibrant	3.00	.....	.....
.....	Golden	.....	.....	.....
.....	Anniversary	3.50	.....	.....
.....	Siren	3.50	.....	.....
.....	Yel. Revelation	3.00	.....	.....
.....	Yel. Snow	3.00	.....	.....
.....	Yuleflame	3.50	.....	.....
.....	Ill. Yel.	.....	.....	.....
.....	Snowbound	4.50	.....	.....

.....	Pk. Calif. Daisy	3.50	.....	.....
.....	Portrait	5.00	.....	.....
.....	Rainbow	4.50	.....	.....
.....	W. H.	.....	.....	.....
.....	Buckingham	3.50	.....	.....
.....	Lotus	5.00	.....	.....
.....	Tempo	5.00	.....	.....

10-Week Varieties				
.....	Dreamboat	3.25	.....	.....
.....	Dk. Bulkeley	3.50	.....	.....
.....	Cover Girl	5.00	.....	.....
.....	Dk. Linda Lou	3.00	.....	.....
.....	Linda Lou	3.00	.....	.....
.....	Miss Clarinda	4.00	.....	.....
.....	Nobility	5.00	.....	.....
.....	Pandora	4.00	.....	.....
.....	Pennant	5.00	.....	.....
.....	Soprano	3.50	.....	.....
.....	Thyra	3.00	.....	.....
.....	Tuxedo	3.50	.....	.....
.....	Masterpiece	3.00
.....	Memorial	4.00
.....	Rose Masterpiece	3.25
.....	Sal. Masterpiece	3.25
.....	Taffeta	3.50



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Rooted Mum Cuttings—1954
GREENHOUSE VARIETIES

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WHITE SPRAY TYPES

Quan.	Variety	Price 50 Only	Unit Price	Amount	Quan.	Variety	Price 50 Only	Unit Price	Amount	Quan.	Variety	Price 50 Only	Unit Price	Amount
7-Week Varieties					12-Week Varieties					13-Week Varieties				
.....	Sept. Morn	\$3.50	.....	.....	.....	Freedom	\$5.00	.....	.....	.....	Wh. Lady	\$4.50	.....	.....
.....	Wh. Wonder	3.25	.....	.....	.....	Kolowa	3.50	.....	.....	.....	Yh. Yuletide	3.00	.....	.....
.....	Chris. Columbus	3.50	.....	.....	.....	Madonna	4.00	.....	.....	.....	Wh. Valencia	3.50	.....	.....
.....	Avalanche	3.25	.....	.....	.....	Wh. Anemone	3.50	.....	.....	.....	Cordova	3.25	.....	.....
.....	Wh. Cloud	3.50	.....	.....	.....	Wh. Mensa	3.25	.....	.....	.....	Fortune	3.50	.....	.....
.....	Horizon	4.00	.....	.....	.....	Whitetop	5.00	.....	.....	.....	Monarch	4.00	.....	.....
.....	Marshmallow	5.00	.....	.....	.....	Moonglow	3.50	.....	.....	14-Week Varieties				
.....	Classic	3.50	.....	.....	.....	Rev. Bushnell	3.50	.....	.....	.....	Acclaim	4.00	.....	.....
.....	Maestro	3.50	.....	.....	.....	Dynamo	4.00	.....	.....	.....	Cameo	3.00	.....	.....
.....	Renown	3.50	.....	.....	.....	Ill. Igloo	4.50	.....	.....	.....	Cotillion	4.00	.....	.....
.....	Silverplate	3.50	.....	.....	.....	Little America	3.00	.....	.....	.....	Spangles	3.50	.....	.....
8-Week Varieties					.....	Nagona (Calif. Wh. Mensa)	3.50	.....	.....	.....	Swan	3.50	.....	.....
.....	Calif. Wh. Daisy	3.50	.....	.....	.....	Pacesetter	5.00	.....	.....	.....	Wh. Enchantress	5.00	.....	.....
.....	Irene	3.25	.....	.....	.....	Shasta	3.00	.....	.....	.....	Carrara	4.50	.....	.....
.....	Norona	4.00	.....	.....	.....	Vesper	3.25	.....	.....	.....	Snowdrop	4.00	.....	.....
.....	Silver Ball	3.00	.....	.....	.....	Ill. Snowdrift	3.50	.....	.....	.....	Ill. Starlet	5.00	.....	.....
.....	Minong	3.00	.....	.....	.....	Matchless	3.25	.....	.....	.....	Snow Queen	4.00	.....	.....
.....	Pristine	3.50	.....	.....	11-Week Varieties					.....	Imp. Wh. Supreme	3.50	.....	.....
.....	Silvertone	5.00	.....	.....	.....	Eskimo	4.00	.....	.....	.....	Yukon	3.00	.....	.....
9-Week Varieties					.....	Lakme	3.50	.....	.....	15-Week Varieties				
.....	Cotton Top	3.25	.....	.....	.....	Sculpture	4.00	.....	.....	.....	Snowcrest	3.25	.....	.....
.....	Keepsake	4.00	.....	.....	.....	Snowflurry	3.50	.....	.....	.....	Garza	3.25	.....	.....
.....	Pinocchio	3.00	.....	.....	.....	Wh. Freida	3.00	.....	.....	.....	Satellite	4.00	.....	.....
.....	Popcorn	3.25	.....	.....	.....	Wh. Norma	3.50	.....	.....	.....	Silversmith	3.25	.....	.....
.....	Shooting Star	4.00	.....	.....	.....	Highbrow	3.50	.....	.....	.....	Snowcap	3.50	.....	.....
.....	Songster	3.50	.....	.....	.....	L. I. Beauty	3.00	.....	.....	.....	Trenton	5.00	.....	.....
.....	Wh. Popcorn	4.00	.....	.....	.....	Nevada	3.25	.....	.....	.....	Heirloom	3.50	.....	.....
.....	Arcadia	3.25	.....	.....	.....	Priscilla	3.00	.....	.....	10-Week Varieties				
.....	Halo	3.50	.....	.....	.....	Seafoam	3.25	.....	.....	.....	Encore	3.25	.....	.....
.....	Seagull	3.00	.....	.....	.....	Crystal Beauty	3.50	.....	.....	.....	
.....	Silver Cloud	5.00	.....	.....	.....	Ill. Bountiful	3.50	.....	.....	.....	
.....	Wh. Doty	3.25	.....	.....	.....	Paramount	3.50	.....	.....	.....	
					.....	Belray	3.50	.....	.....	.....	

YELLOW SPRAY TYPES

7-Week Varieties					.....	Polaris	3.50	.....	.....	.....	Goldrush	3.50	.....	.....
.....	Yel. Chris.				.....	Chas. Nye	3.25	.....	.....	.....	Lee Powell	4.50	.....	.....
.....	Columbus	\$3.50	.....	.....	.....	Garland	4.00	.....	.....	.....	Treasure	4.00	.....	.....
.....	Moonlight	4.50	.....	.....	.....	Yel. Spoon	3.50	.....	.....	.....	Lemonade	3.50	.....	.....
.....	Honeycomb	3.25	.....	.....	.....	Br. Forecast	3.50	.....	.....	.....	Sweepstake	3.50	.....	.....

GREENHOUSE VARIETIES

WHITE STANDARDS

Quan.	Variety	Price 50 Only	Unit Price	Amount
8-Week Varieties				
.....	Silver Sheen	\$3.00	.....	.....
.....	White Chief	3.50	.....	.....
.....	Christina	3.50	.....	.....
9-Week Varieties				
.....	Ambassador	3.25	.....	.....
.....	Kay Tashima	3.50	.....	.....
.....	Queen's Lace	3.50	.....	.....
.....	Granite State	3.00	.....	.....
.....	Albatross	3.25	.....	.....
.....	Snow White	3.00	.....	.....
.....	Wilson's White	4.00	.....	.....
.....	Nightingale	3.25	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
10-Week Varieties				
.....	Betsy Ross	\$3.00	.....	.....
.....	Gt. Betsy Ross	3.25	.....	.....
.....	Ind. White	3.00	.....	.....
.....	Richard Mandel	3.25	.....	.....
.....	Crystal Queen	4.50	.....	.....
.....	Jean Elizabeth	3.25	.....	.....
.....	Monument	3.25	.....	.....
.....	Wh. Pockett	3.50	.....	.....
.....	White Rayonnante	3.25	.....	.....
11-Week Varieties				
.....	Sterling	3.50	.....	.....
.....	Marketeer	3.00	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Indiana Market	\$3.50	.....	.....
.....	Mefo	3.00	.....	.....
.....	Wh. Frick	3.25	.....	.....
12-Week Varieties				
.....	Chattanooga	3.00	.....	.....
.....	Dec. Glory	3.25	.....	.....
.....	Marg. Moeller	3.00	.....	.....
13-Week Varieties				
.....	Dec. White	3.25	.....	.....
.....	Wh. Mistletoe	3.25	.....	.....
.....	Snowline	3.50	.....	.....
.....	Smith's White	3.25	.....	.....

YELLOW STANDARDS

Quan.	Variety	Price 50 Only	Unit Price	Amount
8-Week Varieties				
.....	Harvest Golden	\$3.50	.....	.....
.....	Buttercup (H)	7.50	.....	.....
.....	Celestra	3.25	.....	.....
.....	Gold Lode	3.00	.....	.....
.....	Butterball	3.50	.....	.....
.....	Mrs. Kidder	3.00	.....	.....
.....	Blazing Gold	3.00	.....	.....
9-Week Varieties				
.....	Smith's Super.	3.25	.....	.....
.....	Sunglow	3.00	.....	.....
.....	Yel. Ambassador	3.25	.....	.....
.....	Yel. Bergen	3.25	.....	.....
.....	Golden Glory	3.25	.....	.....
.....	Good News	3.25	.....	.....
.....	Moribana	4.50	.....	.....
.....	Gold Lace	4.50	.....	.....
.....	Hooked Yel. Lace	4.50	.....	.....
.....	Yel. Lace	3.50	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
10-Week Varieties				
.....	Dk. Ind. Yellow	3.25	.....	.....
.....	Imp. Ind. Yellow	3.50	.....	.....
.....	Ind. Yellow	3.00	.....	.....
.....	Jamboree	3.50	.....	.....
.....	Yel. Beauty	3.25	.....	.....
.....	Yel. Monument	3.25	.....	.....
.....	Yel. Pockett	3.50	.....	.....
.....	Yellow Queen	3.25	.....	.....
.....	Honey Dew	3.25	.....	.....
.....	Sue Sally Jones	3.50	.....	.....
.....	Yel. Rayonnante	3.50	.....	.....
11-Week Varieties				
.....	Yel. Marketeer	4.50	.....	.....
.....	Bon. Deluxe	3.00	.....	.....
.....	Cream Mefo	3.25	.....	.....
.....	Friendly Rival	3.25	.....	.....
.....	Purdue	3.50	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Yel. Mefo	3.00	.....	.....
.....	Harvester	3.00	.....	.....
.....	Marie De Petris	3.25	.....	.....
.....	Lorraine	3.50	.....	.....
12-Week Varieties				
.....	Dk. Yel. Chatt.	5.00	.....	.....
.....	Golden Pearson	3.00	.....	.....
.....	Mrs. Calkins	3.50	.....	.....
.....	Sungold	3.25	.....	.....
.....	Yel. Chattanooga	3.00	.....	.....
.....	Golden Mrs. Ross	3.00	.....	.....
.....	Yel. Moeller	3.50	.....	.....
13-Week Varieties				
.....	Chalice	4.00	.....	.....
.....	Golden Mistletoe	3.25	.....	.....
.....	Dauntless	3.50	.....	.....
.....	Meteore	3.25	.....	.....
.....	Tobin's Yellow	3.25	.....	.....

PINK STANDARDS

Quan.	Variety	Price 50 Only	Unit Price	Amount
8-Week Varieties				
.....	Pk. Chief	\$3.00	.....	.....
.....	Major Bowes	3.00	.....	.....
9-Week Varieties				
.....	Sugar Plum	3.50	.....	.....
.....	Bunbu	3.25	.....	.....
.....	Mary Garden	3.50	.....	.....
.....	Mrs. R. A. Walker	3.50	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
10-Week Varieties				
.....	Ind. Pink	3.00	.....	.....
.....	J. W. Prince	3.25	.....	.....
.....	Dk. Orchid Queen	3.25	.....	.....
.....	Lav. Queen	3.50	.....	.....
.....	Orchid Queen	3.25	.....	.....
.....	Pk. Pockett	3.50	.....	.....
.....	Queen of Pinks	3.00	.....	.....
.....	Rayonnante	3.25	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Peggy Hoover	3.50	.....	.....
11-Week Varieties				
.....	Aristocrat	3.25	.....	.....
.....	Helen Frick	3.25	.....	.....
.....	Rose Delight	3.50	.....	.....
.....	Edwin Seidewitz	3.25	.....	.....
.....	Thanks, Pink	3.00	.....	.....
13-Week Varieties				
.....	Pk. Mistletoe	3.25	.....	.....

BRONZE and RED STANDARDS

Quan.	Variety	Price 50 Only	Unit Price	Amount
8-Week Varieties				
.....	Amber Bright	\$3.50	.....	.....
.....	Chopin	7.50	.....	.....
.....	Mayford's Tr.	3.50	.....	.....
8-Week Varieties				
.....	Hilda Bergen	3.25	.....	.....
.....	Glitters	3.25	.....	.....
.....	Red Glitters	3.25	.....	.....
.....	Apricot Queen	3.25	.....	.....
.....	Ivanhoe	3.25	.....	.....
.....	Detroit News	3.25	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Royal Bronze	4.50	.....	.....
.....	Dalwin	4.50	.....	.....
10-Week Varieties				
.....	Dk. Ind. Bronze	4.50	.....	.....
.....	Ind. Bronze	3.00	.....	.....
.....	Ind. Golden Br.	4.00	.....	.....
.....	Anaconda	3.25	.....	.....
.....	Br. Orchid Queen	3.25	.....	.....
.....	Mrs. Stahelin	3.50	.....	.....
.....	Oakdale	3.50	.....	.....
.....	Garnet King	3.25	.....	.....
.....	Mrs. Roy	3.50	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Gena Harwood	3.50	.....	.....
.....	Mamoru	3.25	.....	.....
.....	Nomaga	4.00	.....	.....
.....	Waikiki	3.50	.....	.....
11-Week Varieties				
.....	Br. Frick	3.25	.....	.....
12-Week Varieties				
.....	Gladys Pearson	3.00	.....	.....
.....	Oak Leaf	3.00	.....	.....
.....	Muto's Crimson	3.50
13-Week Varieties				
.....	Br. Mistletoe	3.25

SPECIAL COLLECTIONS

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100 each of 25 varieties, or 250 each of 10 varieties,
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For Collections, please specify:

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Flowering Date.....Colors.....

.....Types.....

PRICES FOR MORE THAN 50 OF A VARIETY ON ONE SHIPMENT

50 Only	100-250 Per 100	300-450 Per 100	500-950 Per 100	1000-2450 Per 100	2500-up Per 100
\$3.00	\$5.70	\$5.40	\$5.10	\$4.80	\$4.50
3.25	6.15	5.85	5.50	5.20	4.85
3.50	6.65	6.30	5.95	5.60	5.25
4.00	7.60	7.20	6.80	6.40	6.00
4.50	8.55	8.10	7.65	7.20	6.75
5.00	9.50	9.00	8.50	8.00	7.50
7.50	14.25	13.50	12.75	12.00	11.25

GREENHOUSE VARIETIES

PINK SPRAY TYPES, Continued

Quan.	Variety	Price 50 Only	Unit Price	Amount
11-Week Varieties				
.....	Brocade	\$3.00	.....	.....
.....	Carole	5.00	.....	.....
.....	Dk. Norma	3.50	.....	.....
.....	Freida	3.00	.....	.....
.....	Orchid Beauty	3.25	.....	.....
.....	Almega	4.50	.....	.....
.....	Dk. L. I. Beauty	4.50	.....	.....
.....	Evening Star	4.00	.....	.....
.....	Grand Slam	4.00	.....	.....
.....	Dk. Pk.			
.....	Majorette	5.00	.....	.....
.....	Majorette	3.50	.....	.....
.....	Pk. L. I. Beauty	3.50	.....	.....
.....	Pinky	3.50	.....	.....
.....	Polka	5.00	.....	.....
.....	Nugano	5.00	.....	.....
.....	Vivacious Lady	4.00	.....	.....

7-Week Varieties				
.....	Bonfire	\$3.50	.....	.....
.....	Marionette	3.50	.....	.....
.....	Mogul	4.50	.....	.....
.....	W. P. Snyder	3.50	.....	.....
.....	Avalon	4.50	.....	.....
.....	Firecracker	4.00	.....	.....
.....	Huntsman	3.50	.....	.....
.....	Mona	3.50	.....	.....
.....	Buckeye	5.00	.....	.....
.....	Panorama	4.50	.....	.....
.....	Bamboo	3.50	.....	.....
.....	Blueblood	4.00	.....	.....
.....	Calico	3.50	.....	.....
.....	Caravan	4.00	.....	.....
.....	Carmine Queen	3.50	.....	.....
.....	Carnival	3.50	.....	.....
.....	Fireside	3.50	.....	.....
.....	Red Velvet	4.50	.....	.....
.....	Admiral	4.00	.....	.....
.....	Carmelita	3.50	.....	.....
.....	Mrs. DuPont	3.50	.....	.....
.....	Nocturne	3.50	.....	.....
.....	Nokomis	3.50	.....	.....
.....	Nytoda	4.50	.....	.....
.....	Witchery	3.50	.....	.....
.....	Moonmaid	5.00	.....	.....

8-Week Varieties				
.....	Cocktail	4.00	.....	.....
.....	Detroiter	3.50	.....	.....
.....	Rajah	4.00	.....	.....
.....	Red Glow	3.50	.....	.....
.....	Robinhue	3.50	.....	.....
.....	James Stewart	3.50	.....	.....
.....	Adelaide	3.00	.....	.....
.....	Jemima	3.00	.....	.....
.....	Talisman	5.00	.....	.....
.....	Paradise	5.00	.....	.....
.....	Palette	5.00	.....	.....
.....	Br. M. McArthur	3.50	.....	.....

9-Week Varieties				
.....	Bonton	3.25	.....	.....
.....	Br. Dot	3.00	.....	.....
.....	Buckskin	3.50	.....	.....
.....	Firebird	3.25	.....	.....
.....	Gaiety	5.00	.....	.....
.....	Oct. Bronze	3.25	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Minuet	\$3.25	.....	.....
.....	Ill. Formal	5.00	.....	.....
12-Week Varieties				
.....	Beautiful Lady	3.00	.....	.....
.....	Hasegawa Pink	3.50	.....	.....
.....	Pk. Cloud	5.00	.....	.....
.....	Princess	4.00	.....	.....
.....	Dk. Valencia	3.25	.....	.....
.....	Dubonnet			
.....	Valencia	4.50	.....	.....
.....	Orchid Valencia	4.00	.....	.....
.....	Sal. Valencia	4.00	.....	.....
.....	Valencia	3.25	.....	.....
.....	Heritage	4.00	.....	.....
13-Week Varieties				
.....	Dk. Enchantress	3.50	.....	.....

BRONZE and RED SPRAY TYPES

.....	Firefly	3.50	.....	.....
.....	Br. Daisy	3.25	.....	.....
.....	Buccaneer	4.00	.....	.....
.....	Hilarity	5.00	.....	.....
.....	Imp. Br. Daisy	3.50	.....	.....
.....	Imp. Red Daisy	3.50	.....	.....
.....	Red Seneca	3.50	.....	.....
.....	Navaho	3.25	.....	.....
.....	Seneca	3.25	.....	.....
.....	Red Daisy	3.25	.....	.....
.....	Br. Buckingham	3.50	.....	.....
10-Week Varieties				
.....	Comanche	3.50	.....	.....
.....	Beauregard	3.50	.....	.....
.....	Bittersweet	3.25	.....	.....
.....	Butterscotch	3.50	.....	.....
.....	Cassandra	3.25	.....	.....
.....	Flame Glow	5.00	.....	.....
.....	Magician	3.50	.....	.....
.....	Orange			
.....	Beauregard	5.00	.....	.....
.....	Red Rust	3.25	.....	.....
.....	Rubicon	3.25	.....	.....
.....	Gypsy	3.00	.....	.....
.....	Br. Linda Lou	3.50	.....	.....
.....	Br. Thyra	3.50	.....	.....
.....	Br. Tuxedo	3.50	.....	.....
.....	Chanticleer	3.50	.....	.....
.....	Chevron	3.50	.....	.....
.....	Copperhead	3.50	.....	.....
.....	Europa	3.50	.....	.....
.....	Ill. Burma	4.00	.....	.....
.....	Mason's Bronze	3.50	.....	.....
.....	Mason's Red	3.50	.....	.....
.....	Samovar	3.50	.....	.....
.....	Sylvanna	3.25	.....	.....
.....	The Titan	3.25	.....	.....
.....	Gold Braid	4.00	.....	.....
.....	Br. Masterpiece	3.00	.....	.....
.....	Dk. Br.			
.....	Masterpiece	3.25	.....	.....
.....	Ill. Rye	4.00	.....	.....
.....	Ill. Tangier	4.50	.....	.....
.....	Paragon	3.50	.....	.....
.....	Red King	5.00	.....	.....
.....	Cadet	5.00	.....	.....
11-Week Varieties				
.....	Ill. Honey	3.50	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Enchantress	\$3.25	.....	.....
.....	Argyle	5.00	.....	.....
.....	Debutante	3.50	.....	.....
.....	Imp. Dk. Supreme	3.50	.....	.....
.....	Lt. Pk. Minstrel	4.50	.....	.....
.....	Minstrel	3.50	.....	.....
14-Week Varieties				
.....	Coronet	3.50	.....	.....
.....	Dk. Riviera	3.00	.....	.....
.....	Riviera	3.00	.....	.....
.....	Serrated Riviera	4.50	.....	.....
.....	Defiance	3.50	.....	.....
.....	Medallion	3.50	.....	.....
.....	Pk. Treas. Island	3.00	.....	.....
.....	Rosalind	3.00	.....	.....
.....	Rose Medallion	4.50	.....	.....

.....	Mrs. Dewey	3.50	.....	.....
.....	Red Princeton	3.25	.....	.....
.....	Shalimar	4.00	.....	.....
.....	Ill. Redhead	3.50	.....	.....
.....	Bourbon	3.50	.....	.....
.....	Ill. Warrior	3.50	.....	.....
.....	Legal Tender	3.00	.....	.....
.....	Rusticon	3.25	.....	.....
.....	Thelma	4.00	.....	.....
.....	Carousel	3.50	.....	.....
.....	Red Rolinda	3.00	.....	.....
.....	Br. Minuet	3.25	.....	.....
.....	Festival	3.50	.....	.....

12-Week Varieties				
.....	Br. Goldsmith	3.25	.....	.....
.....	Falcon	3.50	.....	.....
.....	Ill. Redwood	5.00	.....	.....
.....	Yolanda	3.50	.....	.....
.....	Wanakah	4.50	.....	.....
.....	Apricot Valencia	3.25	.....	.....
.....	Crimson Valencia	3.50	.....	.....
.....	Indian Head	3.50	.....	.....
.....	Amberina	4.00	.....	.....
.....	Galaxy	3.50	.....	.....

13-Week Varieties				
.....	Br. Enchantress	3.25	.....	.....
.....	Dazzler	4.00	.....	.....
.....	Debonair	3.25	.....	.....
.....	Mahogany Viking	3.50	.....	.....
.....	Br. Supreme	3.50	.....	.....
.....	Cavalcade	3.50	.....	.....
.....	Harlequin	4.00	.....	.....
.....	Holiday	3.50	.....	.....
.....	Imp. Br. Supreme	3.50	.....	.....
.....	Pageantry	3.50	.....	.....
.....	Red Supreme	3.50	.....	.....
.....	Christ. Star	3.25	.....	.....
.....	Br. Minstrel	3.50	.....	.....
.....	Dr. Br. Minstrel	4.50	.....	.....

14-Week Varieties				
.....	Br. Riviera	3.50	.....	.....
.....	Christ. Greeting	3.50	.....	.....
.....	Claret	4.00	.....	.....
.....	Sarong	3.25	.....	.....
.....	Topaz	4.00	.....	.....
.....	Merrymaker	3.50	.....	.....
.....	Poinsettia	4.00	.....	.....

Quan.	Variety	Price 50 Only	Unit Price	Amount	Quan.	Variety	Price 50 Only	Unit Price	Amount	Quan.	Variety	Price 50 Only	Unit Price	Amount
.....	Adagio	\$3.50	.....	.....	.....	Champ. Cushion	\$3.00	.....	.....	.....	Gladness	\$3.50	.....	.....
.....	Admiral	4.00	.....	.....	.....	Chas. Nye	3.25	.....	.....	.....	Goblin	3.00	.....	.....
.....	Admiration	7.50	.....	.....	.....	Chippewa	3.25	.....	.....	.....	Golden Carpet	4.00	.....	.....
.....	Alert	3.00	.....	.....	.....	Chiquita	3.25	.....	.....	.....	Golden Hours	3.25	.....	.....
.....	Alex Cummings	5.00	.....	.....	.....	Chopin	7.50	.....	.....	.....	Golden Spoon	3.00	.....	.....
.....	Allegro	3.25	.....	.....	.....	Chris. Columbus	3.50	.....	.....	.....	Gold Lode	3.00	.....	.....
.....	Amber Glow	3.25	.....	.....	.....	Classic	3.50	.....	.....	.....	Goldrush	3.50	.....	.....
.....	Apache	7.50	.....	.....	.....	Cocktail	4.00	.....	.....	.....	Gondolier	7.50	.....	.....
.....	Argonne	3.50	.....	.....	.....	Commander	.....	.....	.....	.....	Harbinger	3.25	.....	.....
.....	Arvis	7.50	.....	.....	.....	Cushion	3.00	.....	.....	.....	Heather Bloom	3.00	.....	.....
.....	Autumn Song	3.25	.....	.....	.....	Corona (H)	7.50	.....	.....	.....	Holiday (H)	4.50	.....	.....
.....	Avalanche	3.25	.....	.....	.....	Courageous	3.25	.....	.....	.....	Honeycomb	3.25	.....	.....
.....	Avalon	4.50	.....	.....	.....	Courtier	4.00	.....	.....	.....	Horizon	4.00	.....	.....
.....	Aviator	3.25	.....	.....	.....	Cydonia	3.00	.....	.....	.....	Huntsman	3.50	.....	.....
.....	Bamboo	3.50	.....	.....	.....	Dark Jewell	3.25	.....	.....	.....	Imp. Early	.....	.....	.....
.....	Barbara Small	3.25	.....	.....	.....	Dawn Rose	3.50	.....	.....	.....	Wonder	3.25	.....	.....
.....	Beacon	3.50	.....	.....	.....	Dee Dee Ahrens	3.00	.....	.....	.....	Irene	3.25	.....	.....
.....	Betty	3.50	.....	.....	.....	Defiance (H)	3.50	.....	.....	.....	James Eadie	3.25	.....	.....
.....	Blueblood	4.00	.....	.....	.....	Detroit	3.50	.....	.....	.....	James Stewart	3.50	.....	.....
.....	Bokhara	3.50	.....	.....	.....	Dr. Graham	7.50	.....	.....	.....	Jewell	3.25	.....	.....
.....	Bowl O'Gold	7.50	.....	.....	.....	Dr. Longley	4.00	.....	.....	.....	Joybringer	3.50	.....	.....
.....	Bonfire	3.50	.....	.....	.....	Dream Girl	3.50	.....	.....	.....	Jubilee (H)	5.00	.....	.....
.....	Brigadier	4.50	.....	.....	.....	Drifted Snow	3.00	.....	.....	.....	Judith Anderson	3.00	.....	.....
.....	Bright Forecast	3.50	.....	.....	.....	Dwight Douglas	6.25	.....	.....	.....	Kath. Lehman	4.00	.....	.....
.....	Bronze Pyramid	3.25	.....	.....	.....	Early Bronze	3.00	.....	.....	.....	King Midas	3.00	.....	.....
.....	Bronze Wonder	4.00	.....	.....	.....	Early Gold	3.50	.....	.....	.....	Lassie	4.00	.....	.....
.....	Burgundy	3.00	.....	.....	.....	Early Harvest	3.25	.....	.....	.....	Lav. Lady	3.50	.....	.....
.....	Butterball (H)	3.50	.....	.....	.....	Early Yellow	3.00	.....	.....	.....	Lee Powell	4.50	.....	.....
.....	Buttercup (H)	7.50	.....	.....	.....	Elizabeth Hood	4.50	.....	.....	.....	Lemonade	3.50	.....	.....
.....	Calcite	3.00	.....	.....	.....	Enterprise	4.50	.....	.....	.....	Limelight	7.50	.....	.....
.....	Calumet (H)	7.50	.....	.....	.....	Ermine	3.50	.....	.....	.....	Lytic	4.00	.....	.....
.....	Canary Wonder	4.00	.....	.....	.....	Fairbow	3.50	.....	.....	.....	Maestro	3.50	.....	.....
.....	Candlelight	3.00	.....	.....	.....	Fascination	5.00	.....	.....	.....	Magnificent	3.50	.....	.....
.....	Capt. J. Smith	3.00	.....	.....	.....	Fashion	4.00	.....	.....	.....	Mahogany	.....	.....	.....
.....	Caravan	4.00	.....	.....	.....	Fiesta	3.50	.....	.....	.....	Cushion	3.00	.....	.....
.....	Cardinal Spoon	3.50	.....	.....	.....	Firecracker	4.00	.....	.....	.....	Major Cushion	3.00	.....	.....
.....	Carmelita	3.50	.....	.....	.....	Fireside	3.50	.....	.....	.....	Malinda Brown	5.00	.....	.....
.....	Carmine Queen	3.50	.....	.....	.....	Flaxen Beauty	4.50	.....	.....	.....	Marionette	3.50	.....	.....
.....	Carnival	3.50	.....	.....	.....	Garland	4.00	.....	.....	.....	Masquerade	3.50	.....	.....
.....	Cecil Beed	4.50	.....	.....	.....	Genista	6.25	.....	.....	.....	

Carnation Cuttings for '53-'54 Season

GENERAL LIST

F.O.B. Shipping Point. Minimum order 100 of a variety except where noted. Shipment November thru spring; state when wanted.

Rooted Cuttings
Price Per
100 1000

Rooted Cuttings
Price Per
100 1000

WHITE

*Frosty (Res.). Large pure white, resembles Olivette	\$22.00	\$180.00
Improved Olivette. New white.....	15.00	125.00
Northland. Large, fragrant white.....	12.00	100.00
Olivette. A good producer.....	10.00	90.00
Peace (Res.) New white.....	20.00	175.00
White Sidney Littlefield. Pure white sport of Sidney Littlefield.....	20.00	150.00
White Sim. Pure white sport of Wm. Sim	15.00	125.00

LIGHT PINK

Crowley's Sim (Res.). Blush pink sport of Wm. Sim. Minimum order 250.....	—	150.00
Gordon (Res.). New light pink.....	22.00	180.00
Light Pink Littlefield. Light pink, similar to Hercules Virginia.....	20.00	150.00
Light Pink Northland (Res.). Flesh pink, sport of Northland.....	20.00	150.00
Light Pink Sim. Light pink.....	20.00	150.00
Portland Pink (Res.). Clear, vivid light pink	20.00	150.00
Virginia Hercules. Large sport of Virginia	15.00	125.00
Virginia Supreme. Light pink.....	12.00	100.00

SALMON PINK

Coral (Res.). Brilliant salmon, large flowers	22.00	180.00
Excellence (Res.). Largest grown medium salmon	25.00	200.00
Janie (Res.). Lighter than Netta and larger	22.00	180.00
Salmon Virginia. Salmon pink.....	10.00	90.00

MEDIUM PINK

*Case's Pink Olivette. Bright medium rose-pink	20.00	150.00
Citation. Rose pink.....	15.00	125.00
Mrs. Virginia Irwin. Medium pink.....	12.00	100.00
Rosalie (Pat.). Flowers medium to large	15.00	125.00
Serenade (Res.). Medium pink. Minimum order 250	—	150.00
Virginia Rose. Uniform production, good keeper	10.00	90.00

DARK PINK

Belvedere (Res.). Rose pink.....	20.00	150.00
Boston (Res.). Dark pink, very productive	22.00	180.00
Fanfare (Res.). Dark pink. Minimum order 250	—	150.00
Saugus Pink (Res.). Deep pink.....	22.00	180.00
Sidney Littlefield. Extra large.....	15.00	125.00
Virginia Miller. Dark pink Virginia.....	12.00	100.00

YELLOW

Canary Queen (Res.). Yellow.....	22.00	180.00
Colorado Gold (Res.). Yellow. Minimum order 250	—	150.00
Harvest Moon (Res.) Yellow gold. Minimum order 250.....	—	150.00
Miller's Yellow. Best yellow.....	12.00	100.00
Patten's Yellow (Res.) Clear yellow.....	20.00	150.00

CRIMSON & RED

*Cardinal Sim. Color similar to King Cardinal	\$20.00	\$150.00
C. W. Weld. Clean, healthy grower.....	15.00	125.00
*Dark Red Sim. Dark scarlet sport of Sim....	20.00	150.00
*Ember Sim. Red sport of Wm. Sim.....	20.00	150.00
Jumbo Cardinal. Improved Cardinal.....	15.00	125.00
Red Beauty. Scarlet, similar to Wm. Sim	20.00	150.00
Red No. 16. Same color as King Cardinal	12.00	100.00
Schaeffer's Red (Res.). New dark red....	20.00	175.00
*Tetra-Red. True red. Sport of Sidney Littlefield. 250, \$55.00; 500 \$100.00	—	180.00
*Tilly (Res.). Rich red maroon.....	22.00	180.00
Tom Knipe (Pat.). Large, full flower.....	15.00	125.00
Topper (Res.). Rich, velvety maroon.....	22.00	180.00
Wm. Sim (Pat.) Vivid red seedling.....	20.00	150.00
Wooster Scarlet. New red.....	12.00	100.00

ORCHID & PURPLE

*Arapahoe (Res.). Bright purple. Minimum order 250.....	—	200.00
Orchid Weld. Orchid.....	15.00	125.00
*Royalty (Res.). Bright royal purple.....	22.00	180.00

VARIEGATED

Aura (USDA). Orange red variegated.....	20.00	150.00
Baby Bronze. Bronzy-buff with pink tinting	20.00	150.00
Barbara Brigham. Apricot with pink penciling	10.00	90.00
Cooper's Variegated Sim. White with red markings	20.00	150.00
Desert Sun (Res.). New yellow variegated	22.00	180.00
*Exquisite. Purple, orchid edged.....	22.00	180.00
Geiger's Variegated Sim (Res.) Renamed "Mamie Eisenhower." White, red penciling	20.00	150.00
Gayety. Flesh pink overlaid with red. Minimum order 250.....	—	150.00
*Golden Harvest (Res.) Golden yellow, slight pink markings. Minimum order 250	—	180.00
Harlequin. Flecked flesh pink.....	15.00	125.00
Lavender Rose. Lavender rose seedling....	15.00	125.00
Mohawk (Res.). Yellow variegated with pink stripes	22.00	180.00
Pelargonium. Mottled crimson.....	15.00	125.00
Peppermint Stick Littlefield. Pink variegated, similar to Pink Art.....	20.00	150.00
*Pikes Peak Frosted Sim (Res.). Medium pink with white penciling.....	20.00	150.00
*Pride of Woburn (Res.). Bright fuchsia with orchid edge. Minimum order 250	—	180.00
Raspberry Ice. White, overlaid with pale orchid	20.00	150.00
Sara Jane Knipe (Pat.) Brilliant rosy magenta, silver edge.....	20.00	150.00
Scarlet King. Sport of Pelargonium.....	15.00	125.00
*Scarlet Sim. Sport of White Sim, similar to Scarlet King	20.00	150.00
Sophie (Res.). White, variegated pink....	20.00	175.00
Symphony (Pat.). Mauve, purple stripes	20.00	150.00
Sphinx. Crimson stripes on rose.....	15.00	125.00
Tetra-Sarah Jane (Pat.). Large flowered Magenta, silver edge.....	25.00	200.00
Variegated Littlefield. Blush pink.....	20.00	150.00
Weirich's Peppermint Sim. Red and white, red penciling. Minimum order 250.....	—	150.00

*New 1953-54 Introductions.

Geo. J. Ball
INC.
WEST CHICAGO
ILLINOIS